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1982

Hastings Reservation

Melanerpes formicivorus

Melanerpes formicivorusChongoHastings Res.7 Jan

Watching here 0930. I find ♀565 ^{wht/m} wht/LBlue right away, but then from 0950 - ~~1000~~ 1020 the granary is occupied solely + uncontestedly by 2 Buckeye birds, ♂663 ^{Metal/Dbrn-BPnk(N)} and ♀666 ^{Blk/LBlue-Red} Blk-Red/m. Those 2 birds sat around, eating acorns, until 1020 when ♀565 returned and started to harrit loudly and mildly chase ♀666 (but not ♂663). This commotion seemed to attract the ♂NB, who proceeded to chase ♂663 out of the granary (with some vigor). ♀565 then chased the intruder ♀ out. I saw one of the intruders fly off across the canyon toward Buckeye. 1040, ♀666 returned, chased by ♀565 but not by ♂NB, even though he was there.

** 12 Jan GROUP UPDATE **

~~11/10~~ ① ♀565 founds Chongo as adult 20 Sept 1981 ± 2 weeks

② ♂849 (nobord's) " " Age unknown " " " " " "

♀565 last seen at 1800 1 Sept 1981; Birds + stored acorns were first seen at Chongo 19 + 20 Oct.

11 Feb

Counted stores, 1530 650 TOTAL

Doing pretty well, considering. Flushed 2 birds from the granary as I walked up. so group is still intact, presumably.

Also took a sample of ~ ³⁰ ~~100~~ acorns (almost all live oak) and replaced them with about 30 of my own

3 April

Counted stores, 1630: 410 TOTAL Not too bad.

Also, walking around with Molly, we find a new roost hole. On Buckeye, 20 m above canyon, in spindly but relatively large Valley Oak 50 m upstream from Chongo. It isn't a great hole, but it could be where they've been roosting. Also, a nice-looking new hole is under construction in the granary.

Melanerpes formicivorusChongo

7 April Molly reported the male sitting in the newly-constructed nest hole on 5 April, so at 0930 I climb up (easy!) to peep in. Not surprisingly, no eggs yet, but it looks like a very nice, deep hole.

12 April I peep into the new hole in the granary, 1330: No eggs.

May
9

Well finally, at Molly's recommendation I come up here to check the hole: I flush a bird out, climb up + find 4 eggs, very fresh (I would guess clutch just completed, or 1 more egg to go). Opened hole (see nest record). I would guess 20 May to look for hatching.

Also, Molly has noted the disappearance of ♀565 and the appearance of a ♀NB. See her notes for details.

13 May Still 4 eggs, 1515. So clutch was certainly completed by 9 May.

22 May Peeped in, 1745. 3 Nestlings, and egg (4) unhatched. It probably won't either, since it's been at least 13 days since it was laid. Also, as Molly had told me, the ♀NB here has a very strange, all-dark eye. Absolutely no white in the iris at all, but the right eye seems completely fine. I don't know what her vision is like, but at least she'll be easy to identify.

28 May Big news here: Molly watched the nest here this afternoon and saw a snake (probably gopher snake) come down the granary, and go into the nest hole! Molly watched for some time, but

Melanerpes formicivorusChongo Nest Record

- 9 May Checked new granary hole 1515, after 4 eggs
flushing bird. Clutch probably new, eggs very fresh,
last egg
probably laid today
- ① 25.0 x 19.1
 - ② 24.6 x 18.8
 - ③ 24.7 x 19.1
 - ④ 25.0 x 18.4
- 13 May Checked hole, 1515 still 4 eggs
- 22 May Peeped in, 1740. 3 nestlings
egg ④ as yet unhatched, probably went
- 28 May Nest check 1800, after gopher snake activity
(see notes) 1 nestling
- 4 June Still one young, 1830
- 11 June Banded one healthy nestling, 1715: Now Juv #801.

Molly saw nestling fledge 20 or 21 June
(see her notes)

Melanerpes formicivorusChongo

(28 May) the snake never emerged. Alan + I walk up at 1800 (1900 daylight), I check the hole + find one terrorized Acorn Woodpecker nestling. Presumably, the two others were eaten, but that is of course unknown. I say, the remaining nestling was terrorized, because it did not give the usual begging calls when I opened the hole. Instead, it gave continuous peepings that a 10-day old nestling gives after being handled. I will have to check here tomorrow.

The remaining nestling was undamaged, as far as I could tell.

1 June I walk up here at 1830 and am amazed to flush a bird from the nest hole and hear a baby squeaking inside. The nest is still active! At least for the moment, as the snake could return at any time.

4 June 1830, flushed an adult from the nest, peeped in, and found one nestling still doing quite well. He may make it yet!

8 June Counted stores, 1845: 150 TOTAL
Also, I heard peeping from the nest (I think), so the nest is still going.

11 June Banded the one nestling here; doing well, now juv #801

18 June ** GROUP UPDATE **

① ♀565 disappears 20 April 1982. Last seen by Molly 17 April, missing by 20 April, a new ♀NB present 24 April,

* * ② ♀872 unbanded ~~was~~ moved here 22 April ± 2 days

Melanerpes formicivorusChongo20 June

Molly reported J801 fledged here this morning during her nest watch. See her notes.

16 Aug

Counted stores, 1800: 20 Close to being out. Also watched a bit here. Saw the 'one-eyed' ♀, heard others. At roosting, the ♀ flew toward the Sycamores.

Melanerpes formicivorusBuckeyeHastings Reservation

** 12 Jan ** GROUP UPDATE *

① ♂619 disappeared about 3 Oct $\pm$ 2 weeks

Last seen at Y on 21 Sept 1981. Missing at Buckeye 16 Oct,
31 October.

**

12 April I walk by the 79-80 hole and the 81 granary hole, 1345.

Nobody looking out of either. Still plenty of acorns stored here.

19 April Another walk by the same two holes, 0830, still nobody looking out of either.

27 April Another walk past, 1030: Nobody in any holes. I even checked the 3 holes in the Valley Oak 50 m SSW of the granary. It seems like they should have a nest by now.

April 30

Again 1730: Still nobody in any holes

1 May

Alan watched up here today, and reported birds going into a hole in the extreme tip of the last live branch of the granary. I walk up at 1630 and indeed find a ♀ (!) looking out of the hole. Pretty darn precarious, but it is a live branch. I'm willing to give it a try with the rope ladder, to at least see how it feels (the limb, that is).

It is possible that they've been incubating for some time, as it is quite likely that I missed seeing this hole on 27 + 30 April.

4 May

I chicken out of climbing up here with the rope ladder, we'll have to go with the extension ladder. Also at 1800 I hear peepings (I think) from inside the hole

Melanerpes formicivorusBuckeye

(4 May) meaning the young have already hatched. This means that 25 May would be a good day to struggle up here with the extension ladder and band the birds.

24 May Alan has been watching here today and on 22 May, and has seen no activity in the nest hole. The implication is that the nest has failed, (possibly because of my disturbance on 4 May?) and they may have a new nest somewhere. On 22 May I walked around here, and found no new holes and nobody looking out of any holes that I knew about. Today Alan saw a bird carrying food off to the large trees just to the north of the granary, but I found no ~~new~~ holes there.

1410, I'm watching the granary from the blind. Very hot day. All 4 helpers (♂663, ♀664, ♂665, ♀666) seen well + simultaneously in the granary, 1515: No evidence of food-taking. And where are the breeders? Could they be gearing up for a new nest and are in the throes of mate guarding? Could some disaster have befallen them all, hence nest failure? Ah, the mysteries of Buckeye!

4 June Watching here 0900 - 1130. Both ♂252 + ♂234 seen well, plus ♀664, ♂665, ♀666. But no evidence of a new nest. Almost every time the birds came to the granary, they flew off toward the north, to

666 pecks hand at 664

Melanerpes formicivorusBuckeye

(4 June) right + slightly downhill of the granary. I even saw one bird carry an acorn bit in that direction. I once again walk over there, find nothing, but then pick up 3 or 4 birds on the far side of the Ravine, perched in some trees there. This could have been where they were flying. After watching the birds there for a while, it again seemed that nothing was up. I walked over, found no holes. So it seems unlikely that Buckeye has a nest.

One possibility is that the always elusive ♀483 has finally disappeared, although I see her so rarely it would be hard to say. Perhaps she disappeared and the 1st nest failed (or vice versa), and because of the two ♀ helpers, no new ♀ has sensed the breeding vacancy ("Finch syndrome"). Buckeye requires more watching.

Dominance! Only other thing of note was that ♀666 pecked ♀664 hard once while the two birds were perched together in the granary.

11 June Trying here again, 0915. Well, still looks like no nest. Only ♂665, ♀♀664 + 666 seen, none carrying food anywhere. This time the birds were always flying off toward the south. Again I checked all the holes I knew about, but found nobody looking out anywhere.

Melanerpes formicivorusPlaque** 12 Jan GROUP UPDATE **① ♀661 disappeared 30 Sept 1981 ± 1 weekLast seen on 22 Sept 1981 at Y. Missing from Plaque by
6 October10 Feb Counted stores, 1700:utility pole 200 (a guess)2° tree 350main granary 16502200 TOTAL

These birds have lost more stores, including a dead horizontal "copulation" limb in the 2° granary. About 100 acorns, 150 holes or so. Probably fell in early Jan.

11 Feb Collected about ~~100~~ 70 acorns from a down limb under the 2° g. The limb came down in early-mid January sometime

4 April Counted stores, 1200:utility pole ~ 502° tree 4001° granary 10101460 TOTAL

Watched here a bit, 1700 - 1800. Even saw a slight ♀dom! dominance interaction: ♀494 + ♀496 perched together in the 2° granary, ♀494 gave ♀496 a couple of gentle pecks to the side of the head. An oh: 1615, looks like definite mate guarding. It seems that both ♂521 + ♂473 are following ♀494, and neither ♂ seems to give a shit

Melanerpes formicivorusPlaque

(4 April) about ♀496. About 4 conspicuous double-♂ follows (2 for sure, 2 inferred, but a pack of 3 nonetheless).

Roosting, Molly watches last years nest up at Buckeye canyon. She sees nothing. But I ~~the~~ saw the birds disappear up that way at dusk. Have they a new hole. Will have to find out tomorrow.

5 April Yes! Start watch 0600. About the first thing I see after walking over the crest of adobe hill, is a new hole, obviously recently worked upon (bark brown, recently disturbed where the birds were "standing" at the entrance. SE side of Buckeye ravine, a blue oak about 40 meters W of last years hole. Dead stub, hole faces N. Easy to get to: Using peeper, at 0600 No eggs!

0650, Nothing has happened here, watching from Adobe
0705, ♀496 alone in 2^o g. Not attended.

0730 All 5 birds in Plaque tree: 0740, A ♀, almost certainly ♀494 (attended by two other ♂♂; I'm pretty sure also that ♀496 remained in the granary.

Someone left with a wood chip (♀494?). ♀ enters one ♂ flies to hole, then a second. ♂ #1 enters, then ♂ #2 which is ♂473 ^{6m} / One ♂ looks out. 0745, I hear tapping from inside the hole. • ~~0744~~ 0755, all 3 birds leave.

0800, I peep in! AN EGG! First (I guess) of the season, laid by ♀494, without question, between 0740 and 0755.

5 April

0730 all 5 Plaque tree

0735 " " " "

0740 ♂521 ♂473 ♀494 new hole | ♂660 ♀496 Plaque area

0745 " " " "

0750 " | ?

♂473 ♂521 both

follow ♀494 //

Melanerpes formicivorusPlaque

(5 April)

0830, Leslie relieves me. She is watching from blind. At 1000 ♀496 enters hole, removes ♀494's egg: How about that!! See Leslie's notes for today

Egg-tossing! However, was today's egg the first egg? Impossible to know, since I didn't find this hole until today.

1300 Opened hole Empty. Hopefully these birds won't be freaked out by it. I did my best to disguise the cut + nails with dap, and then to rough up the dap, so we will just have to wait + see.

6 April

0630, watching hole from blind: Nothing!

0820, ♂473 + ♀496 look in suspiciously for a few seconds, but that's all. No eggs laid, so yesterday's might well have been a "spontaneous abortion" -- another false start. Still heavy guarding of ♀494 by ♂♂ 473 + 521

1650, watching for Prenesting data, summarized on back. Obvious packing by ♂♂ 473 + 521 on ♀494.

7 April

Watching here, 0615. Leslie is watching the nest hole up on Adobe, I'm watching to see (1) ♀-guarding, and (2) To see if the birds are inspecting any other holes.

♀-guarding data on back. Leslie reports at least 3 birds inside the nest hole, carrying out wood chips. I checked the hole at 0820, no eggs. However, I saw no evidence that the birds were interested in any other holes: The only times I lost track of them up Adobe Hill, they visited the hole

6 April 1982

PlaquePrenestingBehavior

1655 - 1815

1655 ♂660 2° | (alone)

1700 ♂♂521 473 ♀494 2° | ♂660 1°

05 " " " (trio) Adobe |

10 ?

15 trio ♂660 1° g |

20 ♂♂473 521, ♀♀494 496 1°

25 trio Adobe | ♂660 ♀496 1° |

30 " " | ♂660 ♀496 1° |

35 ♂660 1° | ♀496 2° | trio elsewhere

40 ♂660 ♀496 1° |

45 all 5 2°

50 core 4 2° | ♂660 1° |

55 core 4 Upper Barn | ♂660 1° |

1800 ♂660 ♀496 1° | others elsewhere

05 ♀496 ♂660 2° |

10 ♀496 ♂660 2° | trio adobe

15 all 5 2°

Following

♂473

♂521

both

♂

♀494 Follows

Failures to follow
Move away from

♀496 Follows

FTF

MAF

||||

|||

|

7 April 1982

PlaquePrenestingBehavior

0615 - 0800

0615 all 5 1° |

20 trio Sycamores |

25 trio ♀496 Watertank | ♂660 1°

30 trio watertank | ♂660 ♀496 1°

35 core 4 1°

40 ?

45 core 4 2°

50 trio Watertank | ♂660 ♀496 1°

55 ?

0700 trio Cabin door | ♀496 utility pole |

05 ♀496 2° | trio cabin

10 core 4 1°

15 ?

20 ?

25 ♂521 ♀494 2° } ♂473 adobe }

30 ?

0735

trio 1° g

0740

" " "

0745

?

0750

?

0755

?

0800

?

Following♂473
alone♂521
aloneboth
♂473+♂521

♂660

♀494

Follow

FTF

MAF

||

|

||||

||

♀496

Follow

FTF

MAF

||

||

Melanerpes formicivorusPlaque

(7 April) Watching in the afternoon briefly with the FA's, it looks like ♀-guarding is breaking down somewhat. Maybe nesting is not so imminent.

8 April Another no-egg day. Molly watched the hole from 0615 - 0830, seeing only ♀496 fly in to remove wood chips. Again, I watched the group. Again it seemed like ♀-guarding was disappearing, but my data are of dubious value. At least 2 intruders were hanging around persistently about 0800, but I could never see who they were.

9 April 0635, I'm watching the new hole from a blind. Zero! Except ~~for~~ for a few karrits behind me, absolutely nothing.

10 April 0640, watching from Adobe Hill, looking at the 1981 hole branch and the new hole. Leslie watching from blind. These birds are starting to play games with us. Leslie reports ♀496 + ♂521 look in, but no action in the hole. Leslie also says a bit of action further up the hill. I wandered around a bit down near the granary, 0700-0800, and didn't see much of anything. Certainly doesn't seem like any mate-guarding is going on, nor any interest in other holes.

11 April Watching from Adobe, overlooking the new hole + last year's hole, 0640. By 0810, NOTHING HAS HAPPENED. A ♂ stumbled up this direction briefly, but that was it.

1450, watching from Lab Area, looking for

7 April 1982 Plaque 1540 - 1610

1545 core 4 UB

50 " " "

55 ♀496 ♂473 UB

1600 ♀494 ♀496 ♂473 UB

05 core 4 1° | ♂660 2°

♂521 MAF both ♀♀

♂473 alone follows ♀494

♂521 MAF ♀496

8 April 1982 Plaque 0615 - 0815

no worthwhile data

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(11 April) any evidence of ♀-guarding. 1510, a nice case of ♂521, ♂473 both following ♀494. Moving up to Adobe 1530, uh-oh, two birds looking into (but not, as far as I saw entering) the 1981 nest hole. Will have to keep an eye on it. I think the hole below the '81 hole is a Starling nest, but not totally discountable.

1545, ♀494 flies back toward the main granary area, followed by two birds, one certainly ♂473. So it seems that ♀ guarding is still in force here. They may yet nest here soon.

* * *

Also, Early AM was extremely windy, and during the night, another major Plaque Storage limb fell. This was the dead, downward-pointing limb in the 2^o granary. An exact estimate of holes + acorns lost will be forthcoming.

12 April Watching here 0620 to 0820. Lots of action ~~and~~ in the new hole, primarily because of a persistent pair of starlings hanging around.

0630 Starling in. 30 sec later, ~~starling~~ starling leaves, ♂473 comes to hole, karrits, flies off.

♂ - ♀ dom

This sort of thing repeated many times. At one point ♂473 and ♀496 were together at the hole, when ♂473 gave ♀496 a gentle peck to the hole. ♂521, ♂473, ♀496, ♀494 all there 0650 ♂473 entered, leaves 0651.

0724 ♀496 enters, leave 0725

Only birds in 0820, checked hole, no eggs

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(12 April) 1400, walking past I find a ♂ looking out of the new hole. Clearly, this is going to be the hole. But when?

14 April 21.3 x 15.6 - possible runt egg
laid by ♀496.

13 April Molly watches here in the morning, sees only a major starling battle. See her notes

14 April Finally, action! Leslie watched here this morning and saw ♀496 in the nest for 15 minutes between 0640 and 0655, at the end of which she flew out of the nest carrying an egg! She carried the egg all of 10 feet to a horizontal, looping limb of the nest tree, where it was partially eaten! I came up at 0840, and ^{Leslie} ~~she~~ directed me to the limb. Egg was partially eaten, but it was still possible to measure it: 21.3 mm x 15.6 - a sure runt! Therefore since ♀496 was the only ♀ in the hole, and clearly nothing was laid the last two days (see Mollie's, Alai's notes: They checked the hole after Molly's watch) we have a clear-cut case of ♀496 laying her own runt egg, then removing it before she had even left the nest! See Leslie's notes for details on eating. When I looked at the egg at ~~0840~~ 0845, A large chip had been removed from near the blunt in. A small amount of reddish-orange liquid (mixed yolk [?] + albumen?)

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(14 April) was sloshing around in the opposite end. The egg was fixed in a crevice on the horizontal part of the limb. Very little yolk albumen remained, about 1-2 mm deep. The egg was "vertical" [blunt end up], not horizontal.

This runt, judging by the reddish color, seems to have had a yolk.

Oh, I did of course check the hole after all this: It was indeed empty. Left 0850

By 0930, I had walked up here with camera to try to get some pictures, but the egg had disappeared. Thrown out at 0700, gone by 0930.

1545, getting guarding data. See reverse.

As was the case last week, the 2 breeding ♂♂ appear to be fairly closely guarding ♀494, although ♂473 seems to slip off by himself on occasion. Both ♂♂ are ignoring ♀496, ~~although~~ even though she was the bird that laid the runt egg today: Very strange. This afternoon, the birds spent a lot of time flying back + forth from the nest area + the granary area (where I was watching from), so I would take that as a good sign that these birds are serious this time. We'll see what happens.

15 April A very distressing day here: In short, ♀496 laid a normal egg, then removed it herself. The gory details follow.

Watching hole 0610: Hole checked 0600: EMPTY.

0619 ♀496 enters, looks out. BD 0620

0624 LO: 0625 BD:

● 1545 - 1730

50

05 all 5 20

10 ♂ 660 20 |

15 ♂ 660 20

20 ♂ 660 10/1

25 0660 10

30 749620 | 0660 |

35 Trio 2^o g/

40 Nobody

45 11

50 ♂ 473 20 ^{UB}g | others e / senhere

55 Nobody

1700 11

05 Trio 2⁰g

1710 Nobody,

15 ♂ 660 20

20 ♂ 660 20

25 ♂ 660 10 |

30 ♂ 660 20 |

♂ 473

♂ 521

both

Q 660

♀ 494

F

FTF

MAF

♀ 496

F

$$FTF$$

MAF

III

1

1

11

1

Melanerpes formicivorusPlaque

(15 April) 0626, ♀496 Looks out: A flicker (♂) is on the nest stub, drumming: 0628 ♀496 back down

0629 LO 0631 BD 0635 LO (starling nearby)

♀496 in hole 0637 BD; 0639 LO;

0619-0657. 0641, ♂461 arrives at hole, looks in, tries to enter but backs out after getting halfway in. Leaves 0642

0645, ♀496 still looking out.

0648, ♂Flicker tapping on nest stub opposite hole;

Then on top of nest stub: ♀496 back down at 0650, despite Flicker. ♀496 Leaves 0657

0658 Peeped into nest: An egg, of course, and does not appear to be a runt: Will open later to measure. Definitely laid by ♀496.

0701, Back in blind, watching.

0733 ♂Flicker back, tapping at entrance to nest (trying to widen entrance?)

0749, ♀494, ♂521 arrive at hole, look in 5 sec each, but neither enters.

0800 ♀494 looks in again, 5 sec, flies off, without entering

0807 " " " " " " " " " "

0807 ♀496 enters, leaves within about 10 sec carrying wood chips! Uh Oh!

→ 0810 ♀496 enters nest, then leaves within 5-10 sec, carrying her own normal egg in her bill! She carried it to the same branch she carried yesterday's runt, in the nest tree, about 10 feet away. Egg placed in crevice. She makes small puncture in egg, eats a bit of albumen,

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(15 April) then flies off 0811.

Big trouble: I climb up to the branch, and measure the now broken egg: 25.5 X 17.8 mm Clearly not a runt, and clearly the work of ♀496, who threw it out. Oh Dear: In addition to the puncture, there was a hairline crack around most of the egg, but I was able to pick it up, measure it, and put it back on the branch without destroying it. The only consolation in all this is that I think I got a nice photo of ♀496 leaving the nest with the egg.

0830, I set up the camera for Leslie to take pictures of birds eating the egg. See her notes for a running account. At 1030, I return to find egg shell in two fragments, one large, one small which I photograph. I then get back in the blind and get one perhaps OK photo of ♂521 holding up the large egg fragment before flying off.

Leslie also reported that ♀496 removed more wood chips during her watch from 0830 - 1030. This sounds suspiciously like ♀496 has not gotten her act together. We'll see what happens ^{tomorrow.} ~~tomorrow.~~

16 April More weird stuff today at Plaque: ♀494 alone lays, and her egg is thrown out by ♂521! What is WRONG with these birds, anyway?

0605, watching hole: Checked at 0600, empty.

0615, a starling enters nest hole, I scare him out.

Back in the blind at 0618:

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(16 April)

0710, ♀494 lands at hole, enters immediately:

0712, ♂521 looks in, enters: Both ♂521, ♀494 in hole together: ♂473 looks in for 30 sec, flies off without entering. 0716, I hear tapping from inside hole.

0716: Uh-oh, ♀496 enters the hole: 3 birds all down inside hole

0719 ♂521 looks out.

0722, One of the ♀♀ leaves with wood chips. Judging by the fact that this ♀ was not followed from the nest by ♂521, and by the fact that ♀496 has been removing a lot of wood chips the last few days, I'd say ♀496 left at 0722. ♂521 continues to look out.~~At~~ 0724: ♂521 leaves, second ♀ (♀494?) looks out. She has a very thin black line from the closure of the bill through the white ^{bar} of the face. She leaves 0724, too.

Checked hole by peeping: A not unexpected new egg: There is some doubt about ownership, since both ♀♀ were in the hole while it was laid: But I'm fairly certain it was ♀494's for the following reasons:

① This egg, even by peeper, was definitely shorter + rounder than yesterday's egg. (♀494's eggs are usually not as long + narrow as ♀496's). Definitely not a runt!

② ♀494 entered first + (presumably) left last.

③ ♀496 has been removing wood chips, Behavior not appropriate for a laying ♀.

0728 Back in the blind.

♀494 in
hole 0710-
0724:
laid egg.

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(16 April) 0801, ♀496 enters, stays 30 secs, leaves with wood chips, not with an egg! Shit!

0810, Leslie relieving me. Anyway, she reports that despite one more wood chip visit by ♀496, it is ♂521 entered about 0845 and removed the egg. Fate of the egg was unknown. Not carried to the same branch nearby, but downhill toward the granary area.

All of this, of course, makes no sense whatsoever. Hopefully, this will turn out to be an aborted nest. What will happen tomorrow?

17 April Answer: Things are getting worse. Basically, Both ♀♀ laid today, and ♂473 threw out what was probably ♀496's egg. As a change, I put the watch details on back:

~~At~~ Anyway, at 0830, only 1 egg, fairly certainly laid by ♀494, remained in the nest, Leslie watched the hole 0830-1100, during which time all 4 breeders entered the hole but no eggs were thrown out. Egg Removal could be over here. Most unfortunate. We'll have to see tomorrow.

1220, getting a bit of pre-nesting behavior data. See reverse. SOS, ♀494 followed by both ♂♂. Only interesting thing is that both ♂521 + ♀496 entered a hole in the Valley Oak by Jim's office

18 April Well, as I feared, both ♀494 + ♀496 laid eggs today, thereby bringing to an end (?) this unfortunate series of egg removals. Details of the watch are on the back

17 April 1982 Plaque Egg-laying watch

0610 watching

0620 ♀496 enters, leaves w/ woodchip, 25 sec later

0625 ♀496 enters, LO

0625 BD

0629 LO

0630 BD

0631 LO

0635 BD

0640 LO

0643 BD

0645 LO, gives two garriks from nest hole

0646 BD, others here

0647 ♀494 enters, ♂521 at hole looking in

♂473 looks in briefly, ♂521 return

0647 tapping from inside hole

0650, ♀496 leaves, ♂521 enters

0650 ♂473 enters

0652 one male looking out occasionally

0653 ♂ leaves with egg! (♂473)

flies down to right of me,
fate of egg uncertain

0657 ♂521, ♀494 still in hole

0704 ♀494 10, leaves 0705

♂521 leaves

0708 checking hole: 1 egg asymmetrical air cell.
opened up, too not marked

26.5 x 19.4

F forgot pen, so

ownership of this egg uncertain, but probably ♀494, as she had been in the hole only 6 min when the egg was removed. The egg was removed by ♂473 was fairly surely of ♀496.

0745 ♀496 enters, leaves with woodchips

0830 Relieved by Leslie

17 April 1982 Prenesting behavior

1220 Trio Blue Oak | ♂660 1° g |

1225 ♂660 1° g |

30 ♂660 2° | ♀496 1° |

35 " " | " |

40 ♂660 1° |

45 ?

50 ♀496 2° | ♂660 1° | Trio Adose

55 ?

1300 ♂660, Trio 2° |

05 ?

10 Trio 2°

15 Trio BBO | ♀496 1° | ♂660 2°

1320 ?

25 all 5 1°

30

35

40 nobody

45 nobody

50 ?

55 ?

1400

05 ♂660 ♀496 1° |

10 ♂660 1°

15 ♂660 1°

1420 ♂660 1° 2° Trio 2°

25 ♂660, Trio 2° |

30 Trio, ♂660 2° |

35 Trio 2°

40 Trio cabin |

♂473

♂521

both

♂660

♀494

F

FTF

MAF

♀496

F

FTF

MAF

I

III III

II

III

Melanerpes formicivorusPlaque

(18 April) of this page, page 12.

The 3 eggs have been marked, but I definitely need to measure them all soon.

19 April

Late start here, but two more eggs laid today. Also, it appears that mate guarding is breaking down ^{and} incubation is about to begin (if not already begun). ♂521 lingered in the hole at 0730 after ♀494 had left the nest area.

Anyway, ♀496 laid before 0645, ♀494 laid between 0707 & 0725.

0800, I opened the hole, measured all the eggs and marked the new ones:

- | | | | | |
|---|-------------|------------------------------|-----------------------|----------|
| ① | 26.7 x 19.6 | ♀494 (for sure) | asymmetrical air cell | 17 Apr |
| ② | 26.0 x 19.0 | ♀496 (probably) | | 18 April |
| ③ | 26.9 x 20.4 | ♀494 (probably) | | 18 April |
| ④ | 27.1 x 20.1 | ♀494 (~~probably~~) | (almost certain) | 19 April |
| ⑤ | 26.7 x 19.0 | ♀496 (almost certain) | | 19 April |

20 April No watch today, but I check the hole at 1700.

A ♂ was incubating as I arrived, so Mate guarding has certainly ended here. Anyway, two new eggs marked & measured.

⑥ 26.6 x 18.9 (♀496 almost certainly)

⑦ 26.4 x 19.7 (♀494 almost certainly) This egg also had an asymmetrical air cell, which ♀494's first egg also had.

Clutch may be complete here, but we shall see what happens tomorrow.

18 April, 1982 Plaque egg-laying watch

0610 checked hole, egg ① is still there

06²~~16~~ ♀496 enters LO

6³~~17~~ BD

634 LO

37 BD

40 LO

41 BD

43 LO

♀496 lays

0647 ♀496 leaves I check hole via peeper: 2 eggs now in nest

0651 Back in blind

0658 ♂521, ♀494 enter

0659 ♂473 enters, LO occasionally

0705 ♂473 leaves

0707 ♂521 LO

0723 BD

0724 ♀494 LO then leaves

0726 ♂521 leaves w/woodchip (!)

♀494 lays

Nest check, 3 eggs

Marked, will measure later

19 April 1982 0650 start

0650 ♀496 looking out

Laid before 0645

0655 halfway back down

0656 I.O., leaves (garricks)

0700 Nest checked, now 4 eggs, a small, skinny one (laid by ♀496)

0707 ♀494 enters, goes down

0708 ♂473 looks in

0709 ♂521 arrives chattering, ♂473 enters, ♂521 at hole

0718 ♂521 flies off

0725 ♀494 leaves

♀494 lays

0800 Nest checked

5 eggs

Melanerpes formicivorusPlaque Nest Record

(See notes for details)

hatched 1 May
from eggs 1+3 (^{both} 9494)Hatched 2 May
from eggs 4-7 (2♀494, 2♀496)

	① #721	② #722	③ #723	④ #724	⑤ #725	⑥ #726
<u>6 May</u>	Blk-Red	Red-wht	D Green	Red	Red- ~~Blk~~ Blue NB	
	27.5g	24.8g	20.8g	19.5g	16.5g	13.0g
<u>13 May</u>	62.0g	58.5g	48.5	47.5g	39.0g	25.5g
~~Notes~~	1215 hrs, feathers just emerging					
<u>23 May</u>	Checked nest + banded 6 nestlings, 1300					
weight ~~wt~~	89.5g	89.0	82.5	81.0	76.0g	63.5g
wing ~~len~~ leg	83.	82	78	76	71	53
devel. seq.	3	2	4	1	5	6

J721 + 722 were definitely ahead of the others size wise, but lagged J724 in crown development



Melanerpes formicivorusPlaque

21 April Would you believe 2 more eggs!? Checked the nest at 1700, found 2 more eggs laid today:

⑧ 26.4×19.5 (♀494 likely)

⑨ 25.8×17.8 (♀496 likely)

This makes a total of 9 eggs, a new record HNHRA clutch! Actually, I shouldn't say total, since somebody could lay tomorrow, I suppose. Room at the bottom of the hole is definitely becoming limiting.

22 April Checked the hole, 1815. Still 9 eggs, so clutch is complete as of 21 April. A good time to check the nest for hatching would be

1 May

1 May As promised, I check the nest 1600. Eggs ① + ③ have hatched, and the young marked with blue sharpie ink on the right leg. All other 7 eggs still present. Egg ② is not going to hatch: Liquid filled center. Will check again early tomorrow. But these two definitely hatched on 1 May. Eggshells still present in the nest.

2 May Check the nest, 1600: 6 babies! The young from 1 + 3 with Blue on the ~~left~~ right leg still apparent. These two definitely the offspring of ♀494! The 4 new today were marked on the left leg, and the larger of these two on the left wing as well.

Eggs ⑧ + ⑨ have not yet hatched, but both have a chance. ⑨ was pipped, but ⑧ was sort of stuck inside an old egg shell. Hopefully that won't affect hatching. Egg ② was removed by me.

Melanerpes formicivorusPlague

- 3 May Nest check, 1715. Still 6 nestlings, all re-marked with blue magic marker. Egg ⑨ is gone. I suspect it hatched (it was pipped yesterday), and the young bird heaved out. Egg ⑧ did not hatch. I removed it from the nest, opened it, and found a fully developed chick inside, quite dead. Hard to see how it failed to hatch. So skew in nestling ownership at the moment is 4-2 in favor of ♀494.
- 6 May Nest check 1430: Still 6 young, doing pretty well. The blue magic marker was still visible, so I know that the two heaviest nestlings came from eggs 1+3, (both ♀494), hatching on 1 May. Weighed + banded the young (see nest record for details).
- 13 May Leslie reported a possible ♂521 heaving out a dead nestling today, so at 1215 we trudge up to check the nest. All 6 nestlings doing quite well, although there is a tremendous weight range (25.5g - 62.0g). Leslie probably just saw a huge fecal sac (removed by ♂521). The runt is still questionable, but he did put on 12.5g in a week.
- 23 May Banded + bled 6 healthy Plague nestlings today: They are now Juvs. 721-726!
- 4 June Walked by the nest, a Juv still looking out at 0845.
- 5 June Counted stores, 1000:
- | | |
|---------------|------------|
| Utility pole: | <u>5</u> |
| 2° granary, | <u>125</u> |
| 1° granary | 470 |
| TOTAL | <u>600</u> |

Melanerpes formicivorusPlaque

7 June Leslie has been looking for the fledglings the last two days, and has seen only 2 of the 6. I go up to check the nest hole at 1500, and find it empty!

So all 6 young must have fledged.

18 June

**** GROUP UPDATE ****

J722, 724, 725, 726 all not seen after banding 23 May, 1982. Very clear now that only J721 + J723 are still around

7 Aug

For the last 2 weeks or so, 1 or more fledgling Cooper's Hawks have been very conspicuous here. Seems like I hear alarm calls every few minutes.

16 Aug

Counted stores, 1600:

utility pole 0

2° g 20

1° g 230

250 TOTAL

Also watched off + on here, 1500-1700.

Complete census, so the Cooper's Hawks haven't done any damage: ♂473, ♂521, ♀494, ♀496, ♂660,

Juv dom!

plus J721, 723 + 724. Plus I saw 3 dom

interactions! J723 pecked twice at J721 and

once at J724. Hopefully this will corroborate

Leslie's hierarchy. Also, I'm pretty sure (not

totally positive) that J724 wht-yellow/whr is

molting into ♀ plumage! As J721 + J723 appear

♂-like, they are probably ♂♂. Birds here seem

to be doing a bit of sapsucking from the bunkhouse Live Oak.

16 Aug Plaque Juv. dom.

723 > 721 11

Melanerpes formicivorusPlaque23 Aug** GROUP ~~W~~ UPDATE **J724
Reinstate ~~J724~~!

Still here, did not disappear.

Melanerpes formicivorusY

6 Jan Watching here, 1000. Complete census: 2 ♀ NB, ♂669 Or-DBlue/~~Wht~~ Blk-Grr/m. At first I + fleetingly ♀668. I could find only the 2 ♀ NB, but at 1030 ♂561 Yellow-Blk/m intruded into the locusts. The 2 ♀♀ started to karrit loudly for ~ 1 min, and occasionally mildly supplant ♂561. All this activity brought in ♂669 (from SHill?) who shagged ♂561 out fairly vigorously.

Still actively storing Live Oak acorns, from a small tree in Big Creek 30 M SE of the barn, and apparently from near Wickerhill trickle as well.

Knoll set appears active as ever, ♂561, ♂564, and 1-2 ♀ (at least 1 NB) as well.

8 Jan Finally, successful ambush here: 2 Birds roosted in the newly excavated hole in the small Valley Oak along Wickerhill Trickle near the dump road. It was too rotten to ambush in normal fashion, so I used the pool pole technique. 2 birds flew out into the net, but one got away, but I fortunately came up with one of the ♀ NB, and she became ♀714, Yellow-DBlue/DBlue-Yellow DBlue-Yellow(N)/Metal

12 Jan * GROUP UPDATE *

♀854 → ♀714, Presumed banded 8 Jan 1982

25 Jan Watching, 1000. Seems to be the status quo here. ♂564^{Metal/Blk} and at least 1 ♀ still hanging out on the knoll. (I saw a ♀ NB here 2 days ago, in the Pump granery.) At Y, ♂402 is back lurking around. ♀714, ♀ NB, both here as well. 1050, just confirmed 2 ♀ NB on the knoll set. In fact, I saw a nice dominance interaction between the two. It would

Melanerpes formicivorusY

(25 Jan) good to get them banded. The Knoll Set birds do "own" the sycamore below the Y. One Knoll-setter is garricking occasionally. It might be ♂564, or perhaps a NB intruder I thought that I saw earlier.

Y proper, birds are still harvesting + storing Live Oak acorns, apparently from the late-ripening tree near the bridge just below the Griffing's house. ♂669, ♀714, ♀NB, ♂402 all seen, but ♀668 not yet confirmed. End 1120

30 Jan Successful ambush here at the same hole as 8 Jan, but all I come up with is ♂669 + ♀714. Both processed and released.

31 Jan Strolling down from SHill, after seeing nobody there, I find 5 birds in the trees right around the Y, 1710: ♀668, ♂669, ♀714, ♂402, ♀NB. I don't know about ♀668. She hasn't been seen at the Y granary in some time now. Also, at 1715 she clearly flew up to SHill (to roost?). At least some birds were roosting in the 30 Jan ambush hole (!).

3 Mar I sneak some glances here while looking for Knoll Setters, and pull off a complete census, 1600: ♀668, ♂669, ♀714, ♀NB all seen well.

4 March Setup ambush at the same hole as 8 Jan, then had an extremely successful roost watch. Y birds seemed to roost about ¹⁸⁰⁰ ~~1700~~, including the ♀NB and another bird in the ambush hole. Sitting near the Blomquist gate, I then turned my attention to the Knoll Set birds. I found ♀715 and ♀NB in the Valley Oak 20 m "upstream" from the

Melanerpes formicivorusY(4 March)

big sycamore below the Y, where the birds have been roosting. Between 1800 and 1810, ♀NB made three trips back + forth between the Valley Oak and the Y granary by the Lower Barn. On each trip, she returned to the VO with an acorn! This amounts to stealing acorns while the owners are in bed. It's very interesting since ① Knoll Set has no granary and no stored acorns, and ② this almost seemed to be an act of intelligent reasoning (dare I say it?) on the part of the ♀NB. The three acorns, it seemed, were broken up and stored in crevices in bit form, in the Valley Oak. ♀715 roosted in the usual sycamore hole about 1805, and ♀NB followed at about 1820.

5 March

SHIT! Ambush here doesn't get the ♀NB. I was too late. 0550 was not early enough. 0530 is better. Anyway, one bird (♀NB) flew out before I got the net over the hole, and all I could get was ♀714 again! I'm getting tired of this. But I will probably try again soon.

8 April

1500, I actually see a bird working on the nice East-facing hole in the Blue Oak on the knoll. I climbed up to that hole not too long ago, and found it to be only about 2 inches deep. Indeed, the bird (a ♂: ♂669?) would have his butt exposed as he pecked at the bottom.

29 April

Been watching here casually the last two mornings. The general conclusions are as follows

① The 4 birds are all here: ♂669, ♀668, ♀714, ♀NB

Melanerpes formicivorusY

29 April all seen well. Also, the Y birds seem to have taken over the entire knoll, and there is no trace of knoll Set birds whatsoever.

② Holewise, nobody seems to be working on the Blue Oak hole on the knoll anymore. Very little progress had been made, and according to Alan, it's still not deep enough for birds to enter.

③ Instead, the last 2 days the birds (♂669 for sure) have been actively excavating a strange new hole in the big Sycamore 30m upstream of the Y Sycamore. The hole is in a thin, sharp, broken stub about halfway up the tree. Still not deep enough for birds to enter, though.

④ Birds are also interested in two holes in the Y sycamore, the one they have been roosting in, plus the weird one just below the woodrat nest.

6 May Watching here 1030. Well, ♂669 is working on yet another hole here. This is in the VO just upstream of the Lower Y Sycamore, in a dead broken stub of the Valley Oak. At the moment, ♂669 is only getting his head in, but he is making progress, it seems. I think ♀NB was working on it for a while herself, just as I walked over.

1045, ♀714 is now working on a hole in the very top of the Low Y Sycamore, in a dead stub. She garricks once. Also a "head only" hole.

1110, ♂669 moves an acorn in the granary. So they do still have acorns, even though they're hard to find.

Melanerpes formicivorusY

10 May Watching here, ~~0645-0830~~ 0645-0830. ♂669, ♀714, ♀IVB all here. I didn't see ♀668 today, but I did see her on 7 May (though I shamefully did not write it down), working briefly on the new VO hole. Today, I saw no interest in any holes, although the weather (overcast, cool) might have had something to do with it. When I first walked up to Y, and at about 0730 again, too, I saw ♂669 and a ♀ up by the still ravine, in the big Valley Oak that contains a hole. I didn't see anybody in or at the hole, but it merits further attention. Also, the Y birds still have acorns (saw a few being moved around and eaten), but I will give them a few more, to hopefully encourage them to nest.

13 May watching 0610-0740. Starting to get frustrated. Only 2 birds seen all morning, ♀IVB and ♂669. Both ♀714 and ♀668 conspicuously absent, although there were some conspicuous ♀IVB intruders around. Absolutely no interest in any holes, that I could see anyway. The 2 birds were ~~always~~ almost always in the granary or on the knoll. Also, ♂669 seems a bit displeased with ♀IVB, harriting and very mildly supplanting her around the granary. They may at rock bottom acorn-wise, so I put ~20 mixed lobata + agrifolia acorns in the ~~knoll~~ trunk of the granary. I'm starting to lose faith in the hope that Y will nest.

15 May 0920, Things getting worse. I come up and hear nearly constant garricking by ♂669. There



Melanerpes formicivorusY

(15 May) are now absolutely no ♀♀ here any more. I saw 2 ♀ intruders here, ♀601 ^{Grn/Yellow} M/whr Lbn, and another ♀ that I thought for sure was ♀648 Lbn - ~~Blk~~ Black/white, formerly of Blon 1. Looks bad here. Both ♀714 + ♀NB have probably gone home. Shortage of acorns? I gave them ~20 2 days ago.

17 May 0650, a quick look here reveals ♂669 and ♀675 ^{Green-whr/M} " " / DGrn of 1500, starting to look as if she wants to join up here. She garricks occasionally, drums frequently, and is occasionally chased around a bit by ♂669. Other ♀♀ seem to be around, too, so it's certainly not over yet. I wonder what's happening at 1500?

19 May Bless my bones! Alan reported yesterday ♀714 and ♀NB back, and sure enough, watching here 0745 I see both ♀714, ♀NB (surely the same ♀855, as she is quite friendly with everybody). Also, ♀668 Blk-grn/Blk, who had been seen feeding young up on School Hill, is back! Or at least, she put in a brief appearance.

Where could everybody have gone the last 5 days or so? My casual guess is that the ♀♀ were participating in a big PS somewhere, perhaps trying to move to a better territory, with acorns? Impossible to know.

In the hope that now maybe Y will nest, again I place ~25 mixed Valley Oak - Live Oak acorns in the granary.

27 May Y is back to screwing around. At 0930 ♂669 alone in the granary, garricking. ♀♀ are probably gone

Melanerpes formicivorusY

5 June A quick look here, 0730: ♂669 is here, as is a ♀NB. Both were hanging out in the Lower Barn locusts, and both were giving occasional garricks. Leslie reported ♀668 back up at School Hill, feeding the nestlings there, on ~~the~~ 4 June.

13 June watched here, 1000-1100. A few interesting points: ① ♂669 and a ♀NB (the same one that has been here regularly?) are here in the Lower Barn Locusts. No sign of ♀714 at all. She may well be gone. ② ♀668 made two brief appearances, and seemed friendly with the ♀NB on both occasions. Once I saw her capture a tipulid in the Lower Barn Area, fly to the top of the Y sycamore, then take off (w/ the tipulid) toward School Hill. I presume she was going to feed the fledglings upon School Hill. Otherwise, I saw no evidence of a nest, and although I saw the birds working the granary a lot (and even the ♀NB moving a small acorn bit). They are certainly effectively out of acorns.

18 June ** GROUP UPDATE **

① ♀668 returned to School Hill 20 May ± 2 weeks
Last seen ~~at~~ regularly at Y in early (up to 7 May) May. Feeding young at School Hill in late May and again on 4 June. Brief appearances at Y 13 June
② ♀714 disappeared ~ 24 May 1982. Last seen on 21 May, missing on 26 May.

Melanerpes formicivorusY28 June

Watching here, 0745-0845. Today it looks like a sure + solid 3-some for Y. ♂669, ♀668, and a ♀NB all looking comfortable. No sign of a nest, but I did see the ♀NB extract an acorn bit from the granary. Perhaps they are not as "out" of acorns as I thought.

18 July

here 1845 to roosting (1945). Indeed, ♀NB, ♂669, ♀668 all seen well. What's more, I'm almost positive that the ♀NB roosted in the 1977 nesthole up the school hill canyon. I will try to ambush ^{500m!} tomorrow.

23 July

Finally, I ambush the ♀NB. She is now ♀833
m/wht
wht-BLK/white

26 July

Watching here 0700. Hrm, bad things. ♂669 + ♀668 are certainly here, but no sign of the newly banded ♀833. Also, one of the School Hill juvies J753 ^{m/white-red}, was flycatching from the Lower Barn Locusts, un-contested by either ♀668 or ♂669. Some Plague Juvies (723 ^{m/Dbrn} for sure) also about.

0800, I walk over to the lower barn, and I find two piles of woodpecker feathers. One is under the granary locust, and the other pile is under the tree next to it to the east. Damn! This is probably ♀833, shit, she could have died or been preyed upon as a result of the ambush. I last saw her in the Lower Barn Locusts on 23 July immediately after I let her go, and I failed to see her in passing on 24 July.

In the "granary pile" I also find an unbanded left leg of a woodpecker(!), but it is

Melanerpes formicivorusY

(26 July) too small for Aw. Probably a nuttall's.

Some other things disturbed me about this find:

① I wrote in the capture record that ♀833 had slight tail spotting. I found ^{all} 10 tail feathers total, none with spots! However, some of these feathers could have been molted normally, & incidentally wound up on the ground near the piles. This is fairly likely, as Of the 10 feathers, only 1 central rectrix was present, meaning some duplication was certain.

I found many 1^o, but even though ♀833 was actively molting, I found no sheathed feathers. Also, all the 1^o seemed quite sharp. Could this have been a juvenile?

In short, we have a mystery!

27 July Watching here, 0815: Ah, ♀833 is here! ♀833 ^{M/wht} ~~wht-Bk/wht~~. No doubt! ♂669 also present. But who, then, was represented by that pile of feathers? A Still juvie? a Plaque juvie? a NB Juvie? ♀668 was certainly here yesterday, so it can't be her.

19 Aug I walk by here at 0800, and find ♂669 flycatching from the utility poles down by the pump. With him were all 3 Still Juvies 753, 754 + 755. ♂669 seemed to get along well with his 3 sibs, even though I don't think they should hoo each other. However, no sign of either ♀668 or ♀833. Y is probably up to its old tricks again.

1982

R. C. Mumme

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Melanerpes formicivorusY

**

** 23 Aug

GROUP UPDATE **

① Reinstate ♀668: ~~She~~ Even though ♀668 was moving back + forth between SHill + Y, she was definitely solidly at Y in July, and it's probably best to say she never returned to SHill

24 Aug

UnOh. At ~1000 I hear garricks, karrits, wakas, and a bit of chasing all going on here. I don't manage to get down for a look until 1800. I find ♂669 of course, plus a ~~QNB~~ ♀NB! Shit! ♀833 appears to be gone, and no sign of ♀668. ♂669 + the new ♀ appear quite friendly. Saw some good copulations at roosting time. Also hanging around was J754 ^{whit-06m/m (SHill)}, who was quite friendly with ♂669. How they "learned" they were sibs (if they did!) is an interesting question. However, the ♀NB and J754 were not overly friendly. They pecked hard at each other at least twice. The first time the Juvie seemed to win, the second the ♀NB definitely did.

25 Aug

Here again 0715. ♂669 + ♀NB, then at ~~07~~ 0720 a second ♀NB, being chased around by the other.

0740, Quiet, but ♂669 + ♀NB moving around together. What about ♀668?

** Yet another GROUP UPDATE **

① ♀833 disappeared 8 Aug 1982 ± 1 week

Last seen 27 July, missing 19 Aug ^{both}

② ♀668 disappeared 8 Aug 1982 ± 1 week

③ ♀NB 873 moved here (AU) 22 Aug 1982

Definitely not here 19 Aug, present 24 Aug

*Melanerpes formicivorus*Y

29 Sept A quick look here, 0930: Three birds here!
♂669 ^{Or-DBlue/white} m/ of course, a ♀NB and
J (♂?) 754 ^{wht-DBrn/M} Lbrn/wht-DBrn, all looking quite
friendly with each other. Pretty sure J754 (of SHill)
is a ♂. Is he in the group for sure? It would
be great if he is, as he is joining ♂669, a sib
that he never "knew" on natal territory. Will have to
keep watching here to be sure.

Melanerpes formicivorusKnoll Set

29 Jan I must finally acknowledge the existence of this group, even though they have no granary, as far as I can tell. Also, I successfully ambushed here in the old hole in the sycamore below the Y, catching ♂564 and an unbanded ♀ which became ♀715. ♀715 seemed extremely weak when I let her go, feebly flying to a willow. She did fly out of there more strongly after a while, so I hope she'll be OK.

31 Jan 1500, Alan + I saw away many of the branches that have overgrown the old Pump artificial granary branches, and install about 35 mixed Valley + Live Oak acorns. A little experiment to see if we can get the Knoll birds interested in the Pump area. We also install a fallen Gate branch w/ ~50 acorns and ~100 usable holes, to sweeten the pot. We saw 3 birds around the Knoll and lower sycamore, so everyone should be around.

1 Feb 1420, Quick results! I walk back here and find 3 birds in the Pump granary! ♀715, ♂564 here for sure! Working acorns! Moving them around! ♂564 even shagged a jay out of the granary. Also a third bird I saw as ♀ Dark/m, probably ♀193. She was here only briefly. ♀NB not around at the moment.

18 Feb A quick look here, 1700, I find ♂564, ♀715 (Blue-DBlue/m) and a bird that I thought was ♀ but read as Yellow/Black (♂561?). However, it looks like the birds are now totally ignoring the Pump granary. All the acorns were gone as of ~10 Feb, and I haven't seen the birds there since 1 Feb. They are back to hanging around the Knoll.

Melanerpes formicivorusKnoll Set4 March

Things getting confusing here: Watched here late yesterday and saw only a ♀NB in the trees below the Y: Today, 0920-1000, a ♀NB, ♂561^{yellow-BK/m}, ♀715^{LBlue-DBLue/Yellow}. No sure sign of ♂564 yet. Other birds, including ♂660^{DBLue-WHT(R)/m} of Plaque.

* → *

Roosting, some interesting observations of ♀NB stealing acorns out of the Y granary, after the Y birds had already roosted. See Y notes.

6 March

Successful ambush here in the same sycamore netting the second (unbanded ♀, now ♀716^{L Pnk/m} L Pnk / Bk-Red

8 March

Beginning to look bad for ♂564 here. Watching 0930, it takes a while, but ♀715^{LBlue-DBLue/Yellow} and ♀716^{L Pnk/m} show up eventually in the Knoll Blue Oak. By 1030, still no sign of ♂564. Alan is watching at 1800 right now to see if he's there.

1035, further developments: ♂669 of Y shows up in the Knoll's Blue Oak 1st tree, and gives mild chases to the two ♀♀. Hmm! Further evidence that ♂564 is indeed gone. Could ♂669 be contemplating polygyny (2 ♀♀ at Y, 2 at Knoll?) Will have to keep on top of things here.

10 March

** GROUP UPDATE ** (Time to admit defeat)

♂564, ♀♀ 856, 857 all found Knoll Set as adults

1 November 1981: ♂564 first noted here 17 Oct, though things weren't settled until 20 Nov

♀856 presumed banded ♀715, 29 Jan 1982

♀857 " " ♀716 6 March 1982

♂564 disappeared 25 Feb 1982 ± 1 week

Melanerpes formicivorusKnoll Set

27 March A quick look here, 1320. Both ♀715 and ♀716 here, seen clearly, in the willow 30 m downstream from the lower Y sycamore. No evidence of ♂564, who Alan has seen in the last week at both 1800 + here.

1550, walking by with Alan, a veritable cornucopia of 1800 birds. ♂561, ♂562, ♀685, ♀696 all seen well. Alan also reports ♂564 and ♀601 (!), obviously on the outs at 1500. Even saw a dominance interaction!

* Dominance** Pretty sure I saw ♀695 peck at ♀696 as the two birds sat in the big Blue Oak on the knoll.

30 March A stroll past at 1620, I find both ♀715 + ♀716, and ♂564 hanging around here. Earlier, at 1430, I saw the 2 ♀♀ in the Pump granary. As I'm writing this, however, All 3 birds are fooling around in the fallen Knoll granary. What's more, they seem to be coming up with Acorns from somewhere.

Y birds seem to be co-testing them for ownership of the dominant Knoll Blue Oak. Y already has control of the hole tree 30 meters NE

1 April A quick look here with Molly + Leslie, 1615. ♀715, ♀716, ♂564 all here. Lots of activity. ♂562 also seen. Lots of chasing centered at the Knoll area. It seemed once again that Y birds were contesting for the Knoll trees. I certainly saw ♀714 in the vicinity, and I also saw some other birds vigorously chased from the knoll back to Y.

4 April Both ♀715 + ♀716 here in passing.

14 April ♀716 LAnK/Metal in the VO $\frac{3}{4}$ up Haystack trail, 0800.



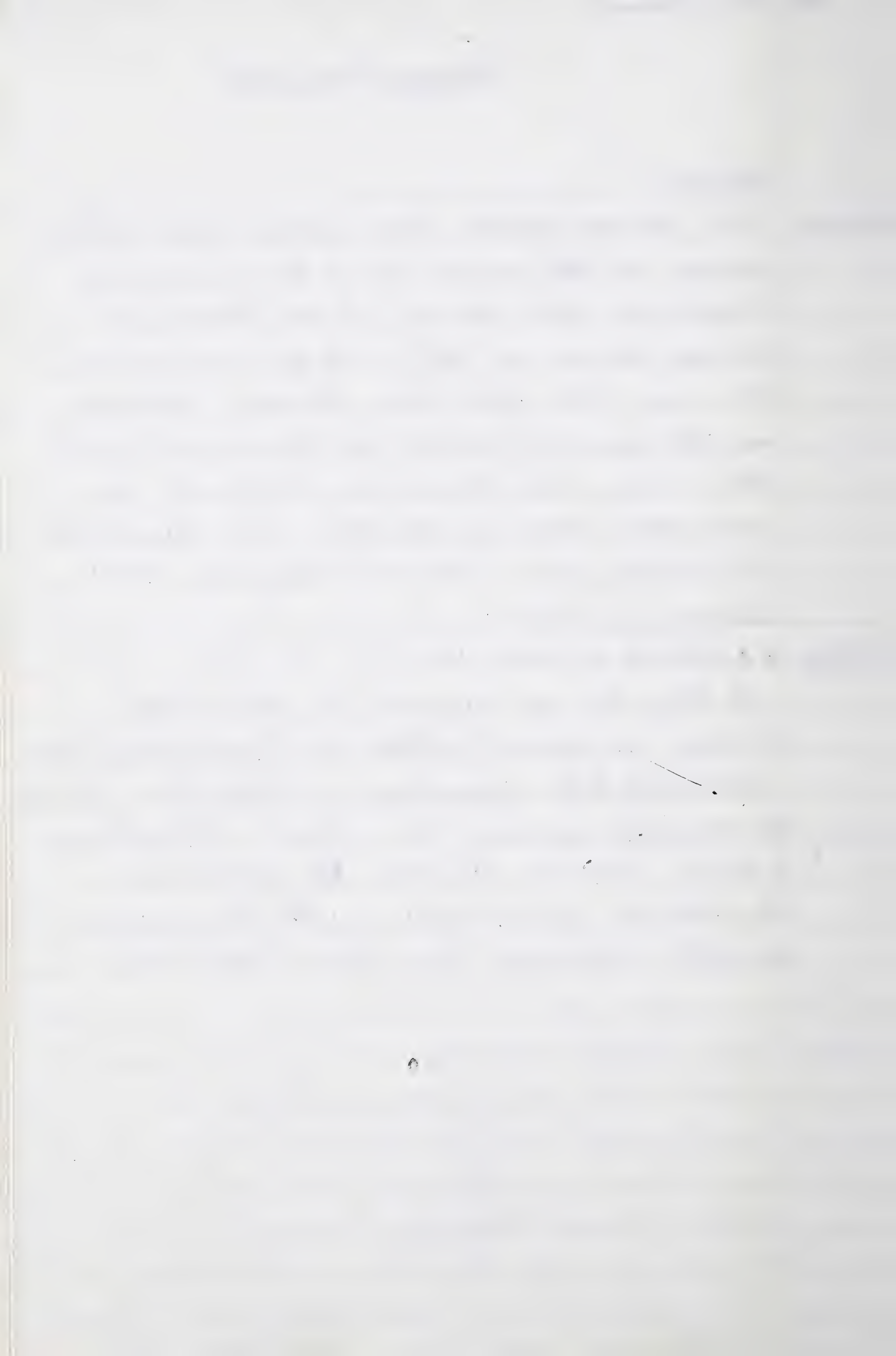
Melanerpes formicivorusKnoll Set23 April

Well, Knoll set appears to be a defunct group. ♂564 has been at 1800 regularly, and I have even seen him intruding at Gate recently. As for ♀♀715 + 716, They were last seen on 13, 14, + 15 April on Haystack Hill, each time in the Valley Oak along the fence-line near the summit of the Hill, by Alan, myself + Molly. Also, it seems that Y birds (by 18 April) have pretty much taken over the Knoll. (See Alan's notes). So I would guess Knoll set abandoned about 10 April ± 1 week.

18 June

** GROUP UPDATE **

- ① ♂564 did not disappear on 25 Feb 1982. Instead, he returned to 1800 ~ 7 April 1982 ± 1 week
 - ② ♀715 + ♀716 abandoned 7 April 1982 ± 1 week
- All these birds were seen here 1 April, ♀715 + 716 on 4 April, but the ♀♀ were ~~back~~ on the side of Haystack on 13-15 April, and ♂564 returned to 1800 ~ the same time (see Molly's notes)



Melanerpes formicivorus1500

7 Jan Watching here 1430. Looks like birds may be harvesting acorns still from the 1500 draw area. Anyway, complete census. ♂297, ♂622, ♀601, ♀675, ♀676, ♂677 all seen.

12 Jan ** GROUP UPDATE **

① J678 disappeared about 5 Sept ¹⁹⁸¹ ± 2 weeks

Last seen 20 Aug 1981 at Blomquist, but missing from there 12 + 14 Sept and from 1500 14 Sept and certainly gone by 30 Sept.

9 Feb Counted stores, 1330:

2° Valley Oak 500

1° granary 1830

2330

TOTAL

Also took a sample of about 35 acorns from the secondary granary. A lot of Blue Oak acorns, (one of few groups with any, that I've seen), plus Valley + Live.

8 March Very strange happenings here, 1100. First, lots of intruders and chasing: Alan had been watching at 1800 and reported intruders there. Here we see 2 ♀ NB in the Sridge, above the granary. We then get a full census (♂297, ♂622, ♀601, ♀675, 676, ♂677), but then we notice that ♀601 seems to be getting chased by her own group members! She even seems to be excluded from the granary, and is hanging out on the ridge area. Once it appeared that ♀601 was being chased by a ♂(!)

1145, Big Chase! 2 birds chase hell out of ~~Alan~~ ♀601 for about 30 seconds, all over the territory. Don't know who, but it was definitely NOT ♂297 or ♂622, as I had them in sight. 1150, Alan reports ♀676 definitely chased ♀601 from the Knoll trees.

Melanerpes formicivorus1500

(8 March) above the granary! Starting to make a bit of sense, now. It seems like the 2 ♀ helpers, 675 + 676, are trying to chase out the breeding ♀, who is not related to the helpers. But what good will that do them? They shouldn't be able to breed here, given that ♂297, ♂622 still here. Why? Could 1500 become another Finch, plenty of ♀♀ but no breeding ♀?

1205, ♀601 on ridge, Alan reports ♀675 lands near her, no chase, but ♀601 did fly off.

2 April ♀601 back at Gate today. See Gate notes.

8 April Counted stores, 1230:

2° granary 125

Main Tree 1260

1385

TOTAL

600 / yellow

17 April Lots of action here 0910: ① ♀601 m, is around, so she hasn't given up yet. However, she is still restricted to the peripheral trees above the granary, and even there she is being chased, apparently by ♀675 and perhaps another ♀ as well (♀676). ♂622, ♂297, ♂677 also seen well. Only ♀676 not so far confirmed.

② On 2 occasions I heard ♂297 give garricks, once from the 1° g + once from the 2° g. In the 2° granary I thought I saw the 2 older ♂♂ working on a hole, near the top, facing the 1° granary.

19 May Well, things looking up here: ♀601, after being at Gate just a week or so ago, is now back + appears to have patched things up with ♀675, the lone

Melanerpes formicivorus1500

(19 May) remaining ♀ helper here (♀676 disappeared in early April)
 At least, the 2 ♀♀ sat side by side in the 130 flycatcher tree without confrontation. Nonetheless, from 0850 - ¹²⁰⁰~~1100~~ I have yet to see ♀601 in either of the storage trees. Primarily, she has been hanging out in the spindly VO along the lane and down by big creek.

→ The big news, however, is that she is being strongly guarded by ♂622 + ♂297, but not by ♂677! (See mate guarding data on reverse). This is very interesting for 3 reasons ① ♂297 did not guard last year when he was the only ♂ in the group ② ♂622 is guarding a ♀ on his natal territory with his father ③ ♂677 may not regard ♀601 as ~~nubile~~ a nubile ♀ since she moved to 1500 ~~while~~ shortly after ♂677 ~~disap~~ fledged! Very interesting. Alternatively, it could be because ♂677 is a subordinate 1 year old. He might guard ♀601 next year. Nonetheless (this ambiguity notwithstanding) this is very interesting indeed.

What's more, the breeding trio is very much interested in hole in a VO on the W side of the ~~road~~ lane directly across from the 1500 1^o granary. Unfortunately, it is one of those thin, dead stubs that could be a pain to open + then put back together. But the ♀ made several trips in and out, and I heard tapping. Birds were primarily eating catkins, as they foraged in the Valley Oaks.

19 May 1982

1500 Mate-guarding

1000 core 3 late | ♂677 2°g

♂677 FTF ♀601 1

05 " " | " "

♂♂ 622 297 F ♀601 HT 1

10 " " | ♂677 ♀675 1°g

15 " " | ♂677 1° | ♀675 HawkTree |

20 " " | ♀675 HT |

25 " " | ♀675 HT

♂622 MAF ♀601 11

30 " " | " "

35 " " |

40 " " |

45 core 3 lane |

50 " " |

55 core 3 ♀675 lane |

1100 ?

05 ?

10 ?

15 core 3 Big Creek |

20 " " " |

25 " " " |

30 " " " |

35 " " " |

40 core 3 ♂677 BC |

45 core 3 BC

50 core 3 SH |

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4

Melanerpes formicivorus

1500

20 May Watching here again, 0700. Well, no interest in the Lane hole today, but the birds were ~~still~~ hanging out a lot near the 1980 nest hole on the side of School Hill. Mate guarding data on reverse. (complete census (excepting ♀676, who is certainly gone))

23 May Overdue mate guarding watch here, 0800-0930. On 21 May, ~ 1800 hrs, I was up on the side of Buckeye Hill, and saw 4 birds, 2 of which were ♂677 ^{M/DB-72(N)} and ♂622 ^{BIK-Or/BIK}. What a shocker! It also looked like at least 3 birds were in a "pack" so it seems likely that the males "guarded" ♀601 all the way up there! The birds were on the N side of the chaparral patch, 100 m W of the Buckeye 1979 nest hole.

Today, the birds were again hanging around the 1980 nest hole upon School Hill. I never saw the core 3 in the granary area at all, and I got precious little mate-guarding data. Also, the birds are no longer interested in the Longfield-Lane hole. However, when Joanne checks the Longfield gophers by flashlight at night, the last 3 nights she has heard birds karrit from the tree. So they may still be roosting there, and the nighttime disturbance may be why they are not interested in that hole anymore.

27 May I finally make it out here again at 0830, and find
① Mate guarding has stopped, + ② The birds appear to be incubating a clutch in the 1979-1981

May
20 ~~April~~ 1982

1500 Pre nesting data

0700 ♀675 HT | others SHill
0705 ♀675 HT | ♂677 1^og |
10 ?

15 ♂677 HT |

20 ♂677 HT |

25 core 3 HT

30 core 3 ♂677 HT |

35 ?

40 core 3 S Ridge ♂677 HT

45 ♂677 HT |

50 ?

55 ?

0800 ♀675 1^og |

both ♂297 + ♂622

F ♀601

HH

MAF ♀675

1

♂677 F ♀601

1

FTF

HH

♂622 MAF ♀601

1

23 May 1982

♂677 FTF ♀676 1

0805 ♀675 HT |

0810 ♀675 HT |

15 ♀675 HT |

20 ♂677 1^og |

25 ♂677 HT |

30 ♀676 ♂677 1^og |

35 ♀676 ♂677 1^og |

40 ♀676 1^og |

45 ♀676 1^og |

50 ?

55 core 3 SH |

0900 core 3 SH |

05 ?

10

15

20

25

30

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Melanerpes formicivorus

1500 Nest Record

27 May Opened 1979, 1981 nest hole, 1730:

3 eggs

Very long + skinny. Marked ①-③.

2 June Checked hole, 0715

4 eggs

① 27.1 x 17.6

② 27.3 x 18.6

hatched

③ 27.6 x 18.8

④ 25.6 x 17.9

} laid before or on
27 May

} laid 28 May (or after)

12 June 0945,

3 Nestlings

no sign of 4th egg or nestling.

Fragments of egg 3
present, so it hatched.

①
L Blue - Red

② → J818
D Blue - white (N)

③
NB

22.0g

20.5g

14.2g

30 June

gone

wt.

80.0g

gone

1615

wing

78

1 Remaining nestling banded Juv. 818.

Melanerpes formicivorus1500

(27 May) hole! Sure enough, I come back at 1730, open the hole, + find 3 long + skinny eggs! I marked them ①-③. Good! Glad these guys are getting it together. I think I got just enough mate guarding data on which to get by. Anyway, this means that laying began probably on 25 May

2 June Checked the nest here, 0730. 4 eggs, all measured and the 4th egg marked (see nest record). This means I should expect hatching ~ 8 June, and banding ~ 30 June!

5 June Counted stores, 0800:

2° granary	<u>10</u>	
1° granary	<u>925</u>	
	<u>935</u>	TOTAL

12 June Checked nest, 0945. 3 Nestlings ~ 5 days old, with no sign of the final egg/nestling. See nest record.

18 June ** GROUP UPDATE **

① ♀ 676 disappeared 10 April 1982 ± 1 week
Last seen intruding at Buckeye 2 April 1982. Missing from 1500 by 17 April

② ♀ 601 returned to Gate ²⁴~~14~~ March ± ¹~~2~~ weeks
Seen being chased at 1500 on 8 March + 19 March, clearly gone by 27 March (see Alan's notes) and back at Gate on 2 April

③ ♀ 601 moved back to 1500 8 May ± 1 week
last see at Gate 27 April. Certainly back at 1500 by 19 May

Melanerpes formicivorus1500

22 June Tried to watch roosting here, but nobody roosted in the nest, despite the young age of the nestlings.

30 June Here to band the nestlings at 1615, I am surprised to find only one nestling! Two, including the heaviest, have disappeared without a trace. Very strange. Could be a case of partial predation, I suppose, but there's no way to tell. Anyway he was banded juv. 818

After thought: Could the other 2 nestlings fall from the nest, to be carried off & eaten by something? Not impossible at all, considering that this hole points downward, and considering what happened at Black Oak last year.

7 Aug Watching here 0740. Wow, by 0800, 3 juv (probably just fledged) Coopers Hawks have flown from the N ridge above the granaries into the Big Creek area. There must have been a nest on School Hill, as I think these are not the same Coopers that have been around Plaque. 0900, ♂297, ♂622, ♀601, and ♂J818 all seen well, but no sign of ♂677 or ♀675.

16 Aug Counted stores, ~~0915~~ 0915:

2° granary 0

1° granary 115

115 TOTAL

♀601, ♂622, plus a juv. seen here in passing.

Melanerpes formicivorus1800

8 Jan 1320, Been sneaking looks the last few days, finally get in an OK census. ♂347, ♂476, ♀193, ♂561, ♂562, ♀695 all here. Missing is ♀696, who could be gone. ♂564 is presumably at the knoll, where he was 2 days ago.

12 Jan ** GROUP UPDATE **

① ♀565 moved (watched ^{Chongo} group) 20 Sept 1981 $\pm$ 2 weeks.
Last seen at 1800 1 Sept, present at ^{Chongo} ~~1800~~ before 19 & 20 Oct 1981

9 Feb Counted stores, 1500.

Fallen Limbs 330

Odd spots 175

main granary 1220

1725

TOTAL

A sample of ~40 acorns taken from the fallen limb, and replaced with a roughly ~~equivalent~~ equivalent # of my own.

3 Feb 1500, Alan watches from the usual spot, while I chase birds around over near 1500. Together, we get a complete census: I see ♂476, ♂347, ♂562; He sees ♀♀193, 695, 696, ♂561. See his notes for additional details.

27 March Lots of 1800 birds at the knoll again. See knoll set notes.

→ Dom → Also a dominance interaction ♀695 > ♀696.

3 April Watching with Molly, 1400. Highlight is ♂564 ^{M /} Red-Bk / Bk-Red is here. In fact, ♀193 gave ♂564 a gentle peck to the head, as the two were perched together, ♀193 eating an acorn. One of very few instances of ♀♀ dominating old male helpers! ♂561, ♂562, ♀695, ♀696 all seen well. ♂347, ♂476 not seen. End ~~at~~ 1520.

→
♀ Dom

Melanerpes formicivorus18008 April

Counted stores: 1330

Fallen limbs 100Odd spots 175Main granary 9251200 TOTAL30 April

After Molly's report today of an apparent end to ♀ guarding, I stroll out here at 1445 and sure enough, find a ♀ (193 I'm quite sure) looking out of the stub hole (unopened) in the granary. I climb up + peep in to find 4 eggs. One more might come yet, I suppose. Hole seems very shallow, and not too hard to climb to: will have to open soon.

3 May

Opened hole, 1630. Still 4 eggs (see nest record) this means that the clutch was certainly complete on 30 April, meaning 11-12 May would be good for hatching, and 1-2 June for banding.

16 May

Checked the hole, 3 healthy nestlings, 1 unhatched egg
See nest record.

1 June

Roosting: Though it was quite dark, I was certain that the rooster had 2 color bands on the left leg, meaning ♂ 476 was the likely bird that roosted.

5 June

Counted Stores, 0830:

Fallen Limbs 0Odd spots 25Main granary 550575 TOTAL



Melanerpes formicivorus1800 Nest Record

Mid April See Molly's notes for mate guarding details:

30 April ♀193 looking out of unopened 4 eggs
hole in granary: Peeped in 1500

3 May Opened hole, 1600 4 eggs

① 23.8 x 18.7 (hatched)

② ~~23.8~~ 24.3 x 19.8 (hatched)

③ 23.2 x 19.0 did not
(hatched)

④ 24.4 x 19.5 hatched

16 May Checked hole, 1030 3 nestlings, 1 un-hatched egg ③
(→ J785) (→ 786) (→ 787)

① DB line-whr (N)

② Red-orange

③ NB

23.5 g

21.5 g

15.5 g

1 June wt 82.0 g

78.0

76.5

1130 wing 75

73

62

crown 1

2

3

Banded 3 nestlings, J785 - J787

Melanerpes formicivorus180018 June

** GROUP UPDATE **

① ♂564 returned to 1800 ³ April 1982 ~~XXXXXXXXXXXX~~

Last seen at Knoll 1 April. Back at 1800 4 April

② ♂564 disappeared 15 May 1982. Last seen at 1800 11 May. Missing by 19 May

③ ♀695 + ♀696 moved to Dark Hollow 12 May 1982

Last seen at 1800 11 May. Missing here 19 May

First seen at Dark Hollow 13 + 14 May

④ ♂561 + ♂562 moved to Hay Blom ~ 7 June 1982

Molly last saw ²² these ♂♂ at 1800 ³⁰ May, and they were missing on ~~22~~ May. However, the ♂173 at HB probably didn't die until 4 or 5 June. Also Leslie saw ♂562

look into the Hay Blom nest on 30 May, after the nest had apparently failed, but before ♂173's death (see Leslie's 30 May nest watch)

15 JulyWalking up Haystack Obls, I find several birds flycatching from the Utility poles near the 2 VO's along the fence approaching the top of the hill. They are all 1800 birds and I even find all 3 Juvies! J785
M / DBLue-Yellow J786 Lbrn / DBrn-BPnk (M) and J787

yellow-wht / Red-white. What's more, I even saw J785 peck hard at J786 twice while the two were perched on a utility pole. Ob45, another J785 pecks J786 plus a good hint that 786 is dominant over 787. On the utility pole, 786 lunged at 787, and 787 turned away + chattered. No contact though. ♂347 + ♂476 also seen

1800

15 July J 785 → J 786 III
786 → 787 (I) ?? No !

21 Aug 787 > 785

	787	785	786
787	—	I	
785		—	III
786			—

787 > 785 1

20 Oct 1982 1800 granary census 1050-1250

1050 nobody

55 "

1100 "

05 ♂347 SA

10 nobody

15 ♂476 ♀193 ea

20 ♂476 ♀193 WH

25 ♂476 ♀193 WS | ♂347 ♀785

30 ♀193 WH | one other

35 ♀193 ♂476 WH

40 ♀193 ♂476 ♀786 SA

45 nobody

50 "

55 ♂476

1200 ♂347 EA ♀193 ♂476

05 ♀193 | ♂476 WS

1210 ♀193

15 ♀193

20 ♀193

25 ♀193 WH | ♂476

30 ♀193 WS | ♂476

35 ♀193 ♂476

40 ♀193 WS | ♂347

45 ♀193

50 ♂476

Storage

♂347 1

♂476 11

♀786 1

♀193 1

①

④

①

②

defense

1120

♂476

nuthatch

2

1230

♀193

passerine

1

22 Oct 1982 1800 granary census

0830 ♀193 ♂476 EA

35 ♀193 ♂476

40 ♀193 MA | ♂347 ♀786 SA

45 ♀193 ♂476

50 nobody

55 "

0900 ♂476

05 ♂476

10 nobody

15 ♂476 ♂347 ♀193 | ♀786 WS

20 ♀193 WS | ♀786

25 ♂476 WH | ♀193

30 ♂476 WS | ♀193 EA | ♂347 SA

35 ♂476 ♂347 WS | ♀193

0940 ♂347 ♂476 ♀193 SA

45 all 6 WS

50 ♀193 ♂476 WS | ♂347 ♀786

55 nobody

1000 ♀193 SA | ♂476

05 ♀193 ♂476

10 ♀193

15 ♀193 ♂476 | ♀787 EA

20 nobody

25 ♂476 MA

30 ♀193 ♂476 | ♂347 SA

⑦ ♂347

② ♀786

⑤ ♂476

③ ♀193

③ 1

① ♀787

21

defense

0900 ♂476 Nuthatch

0916 ♀193 Tit

Melanerpes formicivorus

1800

23 Oct Slow, routine granary census. All 6 birds seen well.

23 Oct 1982 1800 granary census

1415 - 1615

1415 ♀193 ♀787 ♂347
20 ♀193 ♂347 ♂476
25 ♀193 ♂347 ♂476
30 ♀193
35 nobody
40 "
45 "
50 "
55 "
1500 ♀193 ♀786
05 ♂476 ♂347 ♀786 ♀787
10 ♂476 ♂347 ♀787 ♀785 ♀193
15 all 6 (♂347 EA)

1520 ♂476 EA
25 ♂476
30 nobody
35 "
40 "
45 "
50 "
55 "
1600 "
05 "
10 "
15 "

no storing
no defense

1982 R.L. Mumme

Melanerpes formicivorus

Haystack Blomquist

10 Feb Counted stores, 1330. 2185 TOTAL

Also took a sample of ~ 35 acorns from the granary and replaced them with a roughly equivalent number

27 March Counted stores again: 1550 TOTAL

29 April Opened the high hole in the Poison Oak Tree, where Leslie has reported a steady stream of birds. A real bitch, but I find no eggs yet, 1200.

7 May ^{May} Leslie reports incubation behavior here today (though none on 5 May). Sure enough, I climb up to the high PO hole at 1615 and find 4 fresh eggs. I would certainly think ④ showed up today, but I will check again on 10 May or so to make sure clutch is complete, and to mark & measure the eggs. This would mean 18 May would be a good day to expect hatching, and 9 June for banding.

11 May Climbed up to check the nest, 0845, and got a mild surprise 3 eggs! So one egg has mysteriously disappeared, early in incubation. I don't know what to make of that.

Anyway, the 3 remainders marked & measured. See nest record. ♂ in the hole incubating when I got there

23 May Nest check, 1800: A disappointment: Only 1 nestling, eggs ② + ③ did not hatch. Both unhatched eggs were ~~contained~~ undeveloped, so perhaps infertile.

5 June Counted stores, 1700: TOTAL 420

8 June A very nasty surprise here when I climb up here with the intention of banding the nestling, at 1300: After opening up the hole, I reach

Melanerpes formicivorusHaystack Blomquist

(8 June) in and find the dead remains of ♂173
Orange 71 / Black
Orange / 812-35722, about 2 days past death
(meaning he died ~ 6 June). He was blocking the
hole ~ 3/4 of the way to the bottom, facing the
entrance. There was no trace whatsoever of the
nestling! Very strange indeed. I was afraid at
first ♂173 got his foot jammed in the cut of the
hole (like what happened to one of the 1980 School
Hill nestlings) but that ~~was~~ did not seem to be the
case. Nor would it explain the missing nestling.

♂173 Seemed fine, as far as could be told
at this stage. His carcass weighed 87.0g (quite fat),
and the only external problem I could see was that the
right leg color bands seemed to be jammed up and
weren't rotating freely, apparently, because the foot
scales had built up underneath them. But that
seemed minor, and also wouldn't explain the missing
nestling. ♂173 showed no sign of wing or tail molt

molt
→
My only good guess is that some nocturnal
predator killed ♂173 (who would have been roosting
in the nest) and ate the nestling, but left ♂173.
But what? A snake? Nights have been quite cold
of late for snakes. Also, the hole would have been
very difficult for any snake or mammal to get into.
Or possibly the nest failed first, ^{the} young disappeared,
and ♂173's death came later, unrelated to the
nest failure. Another 'case' when it is impossible

Melanerpes formicivorusHay Blom

(8 June) to say what happened. But ♂173 is dead, and the nest has failed.

Walking out, I saw two birds perched ^{together} in the trees below the granary, presumably the 2 ♀♀, ♀604 + ♀711. No evidence of a power struggle yet. We will have to watch carefully here.

→ Cutting ♂173 open at 1400, I find the stomach pretty much empty (except for grit + tiny insect exoskeleton fragments), but the liver was a bright orange-red color, which seemed unusual but of unknown significance.

9 June Leslie reports the 1800 ♂♂ 561 + 562 up here looking very comfortable with the ♀♀. See her notes. Also, Molly has reported All 3 1800 ♂ helpers (♂♂ 561, 562, 564) have been missing the last few weeks. See her notes + nest watches.

14 June Watching here 0850: Very interesting! Both ♂561 + ♂562 are here, and a really guarding ♀604! Very close guarding! See a bit of data on the reverse. Also, they are ignoring ♀711. Leslie reported no guarding on 12 June, but birds prospecting the same nest hole in which ♂173 died: Today they are also doing that. It seems egg-laying (by at least ♀604) is imminent here, all right. End 0950.

15 June Interesting day here: Leslie watched the nest tree starting at 0530. First of all, she learned the the birds here ~~were~~ ^{are} interested in the lower

14 June 1982 Hay Blom Pre nesting

("Core 3" = ♂♂561, 562, ♀604)

09
000 Core 3 g |
05 Core 3 g |
10 ♀711 g | Core 3 NT |
15 ♀711 g | Core 3 NT |
20 all 4 g |
25 ♀711 g | Core 3 NT |
30 ♀711 g |
35 ♀711 g |

both ♂♂ follow ♀604

HTT HHT

MAE ♀711

(1)

♂561 MAE ♀604 1

~~HTT~~

~~HTT~~

Melanerpes formicivorusHay Blom

(15 June) (1981 1st nest) of the two holes in the tree, not in this years failed nesthole. That certainly makes a lot more sense. Also she saw ♀604 make two long visits to the hole (see Leslie's notes). At 0720, I climb up to the hole, re-open it, then have to make one more cut as the hole is now extremely deep. Anyway, After all that I find one egg, certainly laid today by ♀604. I measured the egg (24.6 x 20.4) but I didn't mark it as I failed to carry a rapido graph up with me.

I relieve Leslie for hole watching (after climbing down from the nest) at 0840. ♀604 made a couple of 4 min visits (one at 0917 and again at 0932) and both ♂561 + ♂562 looked in and went in for brief moments while she was in. The ♂♂ were guarding her closely! Unfortunately, no sign of ♀711 even in the nest tree.

**
 →
 * *
 The neatest thing that happened is that at 0920, ♀604 left the nest hole and flew to a nearby branch where a ♂ was present. The other ♂ had made the critical error of flying to the granary while the ♀ was in the hole. Anyway, ♀604 landed on the branch with this ♂, gave a brief tail-up precop display, and the ~~other~~ ♂ mounted the ♀. he gave a good tail twist, cloacal

Melanerpes formicivorusHay Blom

(15 June) contact copulation! The male made good, full contact for ~ 3 sec, at which time the other ♂ came barreling in at full speed from the granary. He charged into the ~~three~~^{two} birds with a full head of steam, knocking everybody over, and at least two of the birds tumbled halfwary to the ground. There followed a lot of chattering, mild chasing, and then all 3 birds charged off together in a very tight pack of 3. It looked like a "rape flight" of mallards, as the birds whirled a twisted around the territory before returning to the granary.

Unfortunately, I couldn't see which ♂ was which in this spectacle. My original thought was that ♂561 was the one that flew to the granary, as he seems to have been moving away from the ♀ ~~granary~~ with some regularity. Also, I think my last fix on ♂562 put him on the branch where the copulation occurred. I would be positive about this, but it means that ♂561 knocked ♂562 off the ♀, and ♂562 is dominant! Leslie saw a good dominance interaction ~~previously~~^{earlier}, and I saw one ~~today~~, as well. ♂562 gave a few sharp pecks to ♂561 around the nest hole, and ♂561 chattered.

16 June Looking bad for ♀711. Although she went in the hole today at 0500, only one egg was laid, probably

Hay Blom Egg laying 16 June 1982

0430 start

0503 ♀711 enters

05 ♀711 1.0 + leaves

06 ♀711 enters

11 1.0.

12 b.d.

15 ♀711 1.0 + b.d. leaves

18 ♀711 enters

20 ♀711 1.0.

23 ♀711 leaves

30 ♀711 enters

37 leaves

0621 ♀604 enters

♂561 + 526

look in + enter regularly

♀604 lays?

0632 ♀604 leaves

34 ♀604 enters

37 1.0.

38 b.d.

45 ♀604 leaves

58 ♀604 enters

0705 ♀604 leaves

Checked nest,

~~Also~~ 1 new egg
(2 total)

Hay Blom MGB 16 June

1340 core 3 NT | ♀711 g

both ♂♂ ♀604 HT 11

45 ♂561 ♀711 g | ♂562 ♀604 NT

50 core 3 NT | ♀711 g

55 all 4 NT |

♂561 MAF HT

1400

05

562

11

10 core 3 NT | ♀711 pond

15 core 3 NT | ♀711 elsewhere

20

25 core 3 NT |

30 core 3 NT |

♂561 often MAF ♀604 when she's
in hole + flies to ♀711

Melanerpes formicivorusHay Blom

(~~15~~¹⁶ June) by ♀604 at around 0620. See back of page 5 for details. It is possible that ♀711 laid the one egg + ♀604 abstained. The egg laid today was enormous: 28.8 x 23.9, marked ① by mistake (yesterday's egg marked ②). However, we watched the hole until 1445, and ♀711 had not re-entered the hole since her visit at 0500 + 0530. No eggs have been thrown out. We watched the hole continuously yesterday, and even though ♀711 entered the hole twice during Walter's watch, she did not throw out yesterday's egg.

It's starting to look that ♀711 may not lay, even though the 2 ♂♂ here are new immigrants. Part of the problem may be the speed with which all this has happened. Little more than a week ago ♀711's father (♂173) was here. Now he is gone, new ♂♂ are here, and the older ♀ in the group is laying eggs already. That might be asking too much of a first-year ♀. We'll see what happens tomorrow.

The ♂♂ 561 + 562 are still following ♀604 very strongly. However, when ♀604 is in the nest, the two ♂♂ (especially ♂561) often fly back to the granary for very brief (< 30 sec) visits, during which time they don't appear to eat any acorns. ♀711 is often in the granary during these visits, but sometimes she is not. Very strange.

Melanerpes formicivorusHay Blom

18 June Walter reports 1 egg yesterday by ♀604, and no eggs today. See his notes for details.

→ **

Also, further insights into the death of ♂173 and failure of the first nest. Leslie's nest watch of 30 May would suggest that the nest had failed by that time already. Only a few visits to the nest by ♀604 + ♂173, without ever going in, excepting 1 visit by ♂173. However, ♂562 also visited the nest once and peeped in, but did not enter, and ♂173 was very much alive at this date! Very interesting.

All kinds of possibilities. Infanticide, murder, etc. impossible to tell, but at least we can eliminate all the scenarios of ♂173 dying and the nest failing all at the same time. Also, we must now consider scenarios of ♂561 + ♂562 actively contributing to the demise of both. Velly interesting.

** GROUP UPDATE **

① ♂173 found dead, died ~ 5 June

●② ♂561 + ♂562 moved here ~ 7 June (♂ 1 week, but not plus. These 2 ♂♂ were here for sure on 9 June (see Leslie's notes). See above discussion for further info.

28 June Leslie reported weirdness here yesterday: No incubation during a nest watch, but lots of flying around by the four residents, wakas, & intruders. I walk up here at 0930 and find things relatively calm. And it looks like incubation is still in progress. I do a 2 hour nest watch

Melanerpes formicivorusHay Blom

(28 June) during which time only ♂562 + ♀604 incubated.

♀711 seen near the nest, but I never saw ♂561.

12/5, I check the nest and find all 4 eggs still present. Eggs ②, ③ + ④ all appear to be developing, and probably have a good chance of hatching. Egg ① (which was actually the second egg laid), the monster, doesn't look like it will hatch. I also measured egg ④, which Walter neglected to measure (see his ~~his~~ notes): 25.7 x 19.9.

16 July Leslie watched here yesterday and saw no feedings, so at 0950 I struggle up to check the nest. Indeed, it has FAILED; ~~the~~ The nest is totally empty, except for a suspicious looking pellet about $\frac{3}{4}$ inch ^{moist, white blotch on one side. Feather shafts inside longitudinal + parallel.} long, dark gray. ^{Gopher snake, perhaps?} I'll have to ask Alan. Doesn't look like an owl pellet. Young were being fed fairly vigorously on 11 July (fide Leslie), and since acorns are still present here, predation certainly is the likely cause of nest failure. Young were ~ 14-16 days old at the time of failure. [Saw ♀604 intruding today at Low Hay, so she is still with us.]

22 July I described the pellet to Harry Green at Berkeley, and he seemed to think that a snake was quite likely.

24 July 0700-0830, interesting watch up here. ♂562, ♀604, ♀711 all here + obvious, but ♂561 is decidedly missing. Lots of intruders in the periphery + occasional chasing. One intruder was J787 from 1800, but another was either a ♂ or a very white-eyed juvenile ^{M/Red} Blue/Red (or ^{M/D Pink} rarer D Pink), who I have no good idea.

1982 R.L. Mumme

Melanerpes formicivorus

Hay - Blom Nest Record

- 29 April Opened high hole in PO tree, 1200 No eggs
- 7 May Checked hole, 1615 4 eggs fresh.
(4th egg probably laid today)
- 11 May Checked hole, 0850 3 eggs (!?)
marked & measured ① 25.8 x 19.5 hatched
 ② 26.2 x 20.1 failed to hatch
 ③ 26.8 x 20.0 failed to hatch
- 23 May Checked hole, 1800 1 nestling (~6 days)
two un-hatched, apparently infertile eggs ② & ③.
- 8 June Checked hole, 1230: Nest Failed
No sign of the nestling, ♂ 173 dead in the nest
(see notes).

SECOND NEST

Melanerpes formicivorusHay Blom

(24 July) (checking the old list, the bird I saw was quite probably ♂638 ^M / ^D Pink, ne' of SOB0! What's more, I thought he had left SOB0. Very interesting.

16 Aug A quick peek, 0650-0730. ♂561 must surely be gone, and since Molly has not reported him at 1800, he's probably dead. I will have to check Leslie's notes here, but I don't think ♂561 has been seen since the prenesting period. He never came to the nest at all during feeding, and perhaps not during incubation, too.

♂562, ♀604, ♀711 all seen well here, but that was it.

Counted stores

65

Near the end

23 Aug ** GROUP UPDATE **

① ♂561 disappeared 20 June ± 2 days, 1982
 Last seen for sure on 17 June Gone for sure
 by 24 June, even though ^{he} ~~it~~ was missing even on 18 June

23 Sept Watching here 0820. 0850, ♂562, ♀604, ♀711
 all here & seen well. No sign of a fall nest.

Melanerpes formicivorusLower Haystack8 Jan

Watching here, 1010. 3 birds stripping moss of the old Blue Oak nest tree. 1035, ♀614 ^{DBrn-BPnk (N) / DBrn} " / m from Finch (!) intruding here, chased mildly by ♀587 ^{BPnk-BLK / m} wht BLK / BPnk ♂461 DBlue-wht / LBlue-wht also seen, and I'm fairly certain that I saw ♀523 ^{m / Red-DBlue} DBlue / wht-DBlue, but not absolutely positive. 1200. Finally, I confirm ♀523, ♀524 ^{DBrn-BPnk (N) / white} m / DBrn-BPnk (N) Comple census. Saw ♀523 & ♀587 doing a bit of Live Oak acorn storing toward the end of the watch. The acorns were coming from below the granary, in the live oaks bordering the field (I think). End 1200.

12 Jan

** GROUP UPDATE

① ♀587 returns to Low Hay 28 Sept 1981 + 1 week

Probably seen back on 5 Oct 1981, certainly on 1 Nov.

Still absent on 20 Sept.

30 Jan

Granary census, 0830-1030. Lots of action, granary defense wise 2 ♀ intruders, 1 NB, and one I read as ^{or-wht/or} Metal / , which could really only be ♀696 of 1800, who I hadn't seen since November. No storing, but I did see birds hassling a ♂ Kestrel inspecting that hole in the 2° granary, plus a few scrub jay chases. Actually, ♀587 did store 1 acorn late in the watch. She brought it in from the 2° area. Complete census, ♂461, ♀523, ♀524, ♀587 all seen well.

10 Feb

Counted stores: ¹⁵³⁰

2° granary	255
1° granary	3345
	<u>3600</u> TOTAL

Also took a sample of ~40 acorns, replaced with my own.

30 Jan 1982 Low Hay granary census. 0830-1030

0830 nobody

35 "

40 "

45 ♂ "

50 ♂ 461 10 ♀ 587 20

55 ♀ 587 ws, ♀ 524, 1 other 10

0900 nobody

05 ♀ 523 ♀ 524

10 ~~both~~ ♀ 587 ~~both~~ ♀ 523 ♂ 461

15 ♀ 587 ♀ 523 ♂ 461

20 nobody

25 " both

30 ♀ 587 ♀ 524 ws

35 ♀ 587 ws, ♀ 524

40 nobody

45 ♀ 524, ♂ 461, others

50 ♀ 587 ws

55 ♀ 524, ♂ 461 ws | ♀ 523 ♀ 587

1000 ♀ 587

05 ♀ 524 ws, ♂ 461 ♀ 523 ~~both~~ ♀ 587

10 ♀ 587

15 ~~both~~ ♀ 524 ♂ 461

20 nobody

25 "

30 "

storage

♀ 587 1

defense

0849 ♀ 587 Kestrel 1

0850 ♂ 461 " 1

0853 ♀ 587 Kestrel 2

0935 ♀ 524 Jay 1

0936 ♀ 524 ♀ NB 2

♀ 587 " 3

0940 ♀ 524 Jay 2

0945 ? ♀ 696 (1800) 2

1005 ♀ 587 Jay 1

Melanerpes formicivorusLow Hay

11 Feb Granary census 1125-1325. As I walk up I find ♂669 of Y ~~band~~ Or-DBlue/white Metal / , intruding briefly. ♂461 near, but no obvious response. ♂669 may "know" ♀523, since she helped raise him at Still last year.

After that, sheer dullsville. I going to move the blind here above the granary. My presence may be disturbing these birds, so I'll try next time in the blind. Only ♀524 and ♂461 seen.

18 Feb Again, granary census 1435-1635. A little better today. Perhaps the blind does help. Anyway, a complete census (♂461, ♀♀523, 524, 587 all here) and a few granary defenses as well.

21 Feb Another granary census, 0830-1030. This one was pretty hot defense-wise. Lots of intruders about, including ♀664 from Buckeye and ♀695 from 1800. Complete census, all 4 birds seen well. A very springlike day. The "core 3" were doing a lot of friendly greeting to each other, and the ♀♀ were looking very "precopulatory", if that's a word. Tail raising, open-wing walking, flying to ♂461, etc. The granary here is beginning to leak out, adding to the general spring atmosphere. Also saw ♀587 give some chatters in the presence of the breeders, but it was difficult to tell ~~whether~~ whether they were directed toward the ♂ or the ♀♀.

22 Feb Another granary census, 1420-1620. Pretty slow, cool cloudy, windy day. Only real high point was a flock of 13+ Pigeons in the granary eating oak buds, being vigorously chased by ♀524 (and mildly by ♀587).

11 Feb 1982 Low Hay 1125-1325

1125 nobody
30
35
40
45
50
55 ♀524
1200 nobody
05 "
10 "
15 ♂461
20 nobody
25 "
1230 nobody
35
40
45
50
55
1300 ♀524 EA
05 nobody
10 "
15 "
20 "
25 "
BORING!

No storage
No defense

18 Feb 1982

1435-1635

1435 nobody
40
45
50
55
1500 ♀587 EA
05 ♀587
10 ♀587
15 nobody
20
25 ♀523 2°
30 "
35 ♀524 EA ♀587 1° ♂461 2°
40 ♀524 1° | ♀587 2°
45 ♀523 1° | ♀587 ws 1°
50 ♀587 1°
55 nobody
1600 "
05 ♀523 1°
10 "
15 ♂461 ws ♀587 ♀523 1°
20 ♀587, ♀523 1°
25 ♀587 ♀524 1°
30 ♀523 ws ♂461 1° | ♀587 ♀524 ws 2°
35 ♀ ? 1°
1615 ♀524 ♀NB 2
1625 ♀524 nest 2
plus others

21 Feb 1982 0830-1030

0825 ♀587 EA
30 ♀587
35 ♀587 MA ♀523 EA
40 all 4
45 all 4
50 ♀587
55 nobody
0900 "
05 all 4
10 ♀524 ♀587 ♂461
15 all 4
20 all 4
25 ♂461
0930 ♂461 ♀523
35 ♂461 EA ♀523 ♀524
40 ~~nobody~~ ♀524 ws
45 nobody
50 nobody
55 "
1000 "
05 "
10 ♀523 524 ♂461
15 ♀523 ws, ♀524 ♂461
20 ♀523 ♀524 ♂461
25 ♀523 ♀524 ♂461
0835 ♀587 Titmouse 2
0845 ♀523 Scrub Jay 1
0846 ♀587 Scrub Jay 1
0848 ♀587 Titmouse 1
0910 ? ♀664 (Bark) 2
0915 ♀523 ♀ M. L. split 2
0920 ♀523 ♀695 (1800) 1
♀524 1

22 Feb 1982 1420-1620

1420 nobody
25 "
30 "
35 "
40 ♀523 ws ♀587 EA
45 nobody
50 "
55 ♀524
1506 ♀524
05 ♀524
10 ♀524
15 nobody
20 ♂461 ♀524 EA ♀523
1525 ♀524 ws, ♀587 ♂461
30 ♂461 ws, ♀524, ♀587
35 nobody
40 "
45 "
50 "
55 "
1600 "
05 ♀524 EA
10 ♀524 ws ♂461
15 nobody
20 "
1520 ♀524 Band tails 3
(Pigeons were eating buds of
granary, just leaving out
♀587 " 2

Melanerpes formicivorusLower Haystack25 Feb

Last of the granary censuses here, 1100-1300. Again I heard ♀587 do some chatters to the adults. Also, the residents here were hassling a ♀ Kestrel that every so often flew into the granary. Complete census (♂461, ♀♀523, 524, 587) once again, and this should be last watch here for awhile.

27 March

Counted stores, 1500:

2 ^o granary	<u>105</u>	
1 ^o granary	<u>2870</u>	
	<u>2975</u>	TOTAL

13 April

Alan + Molly have reported activity here in the 1979 nest hole in the granary. I reopen it at 1100, but find that the hole has been substantially deepened, requiring a large new cut (that just barely allows me to reach the bottom).

No eggs.

15 April

Molly has reported little or no action in the 79 hole, so I watch briefly up here, 1400-1530. I see almost nothing. However, the birds were hanging around the Poison Oak - Blue Oak Vest Tree, and at one point I saw ♂461 look into that hole, and a ♀ enter for about 10 sec. I check the hole, & like last year, it is totally devoid of any wood chips. Hopefully, these birds aren't serious about nesting yet.

19 April

A quick watch here, 1010-1110. Nothing much. Birds flycatcher-like mad, primarily from the Blue Oak nest tree area, and from the granary. No action in any holes, although ♀587 peered in the 79 hole after swallows were in the vicinity. As Molly had mentioned, a ♂NB seemed to be around the 2^o area a bit.

♂461 FTF all the ♀♀ at least once. See reverse

25 Feb 1982 Low Hay granary census 1100-1300

defence

1100 nobody
05 "
10 "
15 "
20 ♀523 ♀524
25 nobody
30 ♂461 ♀523 ♀524 WS
35 nobody
40 "
45 ♂461 ♀524 WS
50 ♂461 ♀524 ♀587
55 ♀524 WH, ♂461
1200 ♀523 EA, ♂461 ♀587 WS

1205 ♀524 ♂461 WS, ♀523 ♀587
10 ♀524 ♂461 ♀523 ♀587
15 ♀524 ♂461 ♀523 WS, ♀587
20 ~~♂461~~ ♀587 MA, ♂461 WS, ♀523, 524
25 all 4 WS
30 ♀524 WS, ♂461 EA
35 ♂461 ♀524 ♀587 all WS
40 ♂461 ♀524 ♀587 all WS, ♀.
45 all 4 WS
50 all 4 WS
55 ♂461 ♀587
1300 nobody

1125 ♂461 kestrel 2
1215 ♂461 kestrel 2
♀524 " 2
(♀♀523, 587 near, much less response

19 April

♂461⁶¹ FTF ♀587 111
♀524 1
♀523 1

♂461 F ♀523 1

Melanerpes formicivorusLow Hay

21 April Watching here 0610: Well well, at 0615 hanging out in the starling nest tree in the 2° area are both a ♂ N13 (certain) and a ♀ N13 (pretty sure). Perched only 30 meters away near the Blue Oak nest tree are 3 Low Hay residents. Even heard the two newcomers waka to each other!

0645, Un-oh, ♀523 is looking out of the 79 hole! Probably entered about 0630, when she flew to the quarry from the 2° area, not followed by ♂461. I bet she has laid! Timing seemed right, etc. ♀523 leaves 0655.

→ Whoa, 0707, ♀524 enters nest, leaves <10 sec later carrying egg! Almost certainly just laid by ♀523. The egg was carried by ♀524 to a high, uphill branch of the tree, and she pecked at it a few times before hitching up higher. The egg looked pretty small. Could have been a runt! I might be able to get to it + measure it before it's destroyed, but I better give ♀524 a chance to lay, first.

0715 ♀524 enters, l.o. 30 sec later, leaves 0716: 0727, (checking nest. Empty (thank god!))
 Plus, I was able to get to the egg placed in the tree. NOT A RUNT! 25.5 x 20.3, with (as is the norm for ♀523) an asymmetrical air cell. We're in good shape!

The egg had a very small puncture near the middle of the egg. 0755, In blind, watching hole + egg. I don't believe ♀524 was going to lay today, as she made two short trips to the hole. Notes on egg eating on back. End 0845.

→

21 April 1982

♂461 FTF ♀523 /

Notes on egg-eating at Low Hay, 21 April 1982

start 0755

♀524 0815 4 min 0 sec liquid

♀523 within 6 inches
for last two min. No aggression
between ♀♀

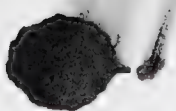
♀523 0819 4 min 30 sec liquid, though

she did hold up the egg (using the puncture
hole as a grip.

0845 leave,
Leslie takes over

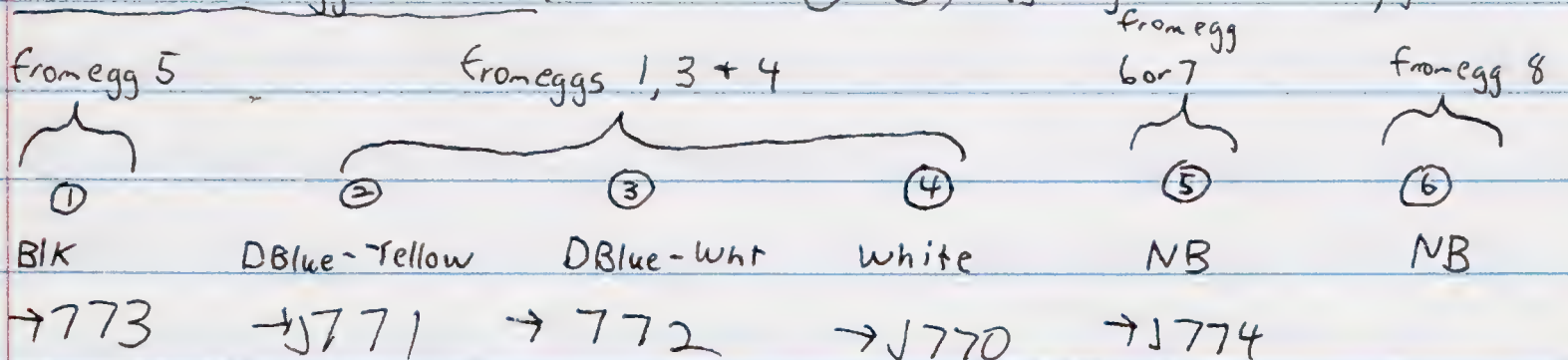
Melanerpes formicivorusLower Haystack Nest Record

<u>21 April</u>	♀523 lays 1 egg, thrown out by ♀524 (see notes)	25.3 x 20.3 ♀523 asymmetrical air cell
<u>22 April</u>	Opened hole, 0815; 2 eggs	hatched 1 ① 26.4 x 20.6 (♀523?) asymmetrical aircell, calcium chips on shell disappeared ② 19.7 x 16.1 (♀524?) runt, yolk present.
<u>23 April</u>	Checked hole, 0815 2 eggs fresh, plus 2 from yesterday	hatched ③ 26.1 x 21.0 (♀524?) calcium chips, air cell <u>way</u> off center hatched ④ 26.4 x 20.4 (♀523?) calcium chips, air cell slightly off center
<u>24 April</u>	Checked hole, 0615, 1 new egg (♀524 in hole 0540-0605)	hatched 12 day ⑤ 26.6 x 21.3 ♀524 air cell slightly off center
	Checked hole 0730 1 new egg (♀523 in hole 0710-0715)	hatched 7 May ⑥ 25.9 x 20.2 ♀523 air cell slightly off center
<u>25 April</u>	Checked hole, 1700 1 egg new	hatched 7 May ⑦ 26.6 x 22.0 (♀524?) air cell <u>way</u> off center, calcium chips
<u>26 April</u>	Checked hole, 1300 1 new egg	hatched 8 May ⑧ 27.1 x 21.5 (♀524?) air cell slightly off, calcium chips
<u>29 April</u>	Checked hole, 1245	26 April 8 eggs clutch complete
<u>6 May</u>	1715, Checked hole	4 babies (from eggs ①, ③, ④ + ⑤) 5 had just hatched... Young still attached to membranes runt egg gone (②). Eggs ⑥, ⑦ + ⑧ all have a chance
<u>7 May</u>	1345, Checked hole	6 babies. 2 new from ⑥ + ⑦
<u>11 May</u>	from egg 5 ① BIK ② DBle-Yel ③ P ④ WHF ⑤ ~~Blue RL~~ NB ⑥	Egg ⑧ present, not yet hatched.
Nestcheck	19.5 19.2 19.5 19.5 12.0g 6.0g	
0800	Blue LL Blue RL Blue RL Blue RL Blue Rwing no mark	



Melanerpes formicivorusLow Hay Nest Record (continued)

all 7 normal eggs hatched. One (from (6) or (7)) nestling present 7 May, gone 11 May



11 May
0800

19.5 g 19.2 g 19.5 g 19.5 g 12.0 g 6.0 g

17 May
1440

53.0 g 54.0 g 51.5 g 54.0 g 40.0 g gone

feathers just barely starting to emerge

1630
30 May
wing
Crown

91.0 94.0 g 94.0 g 91.0 g 83.0 g

82 93. 94 87 74

2-4 2-4 1 2-4 5

Banded 5 nestlings, all doing quite well

Melanerpes formicivorusLower Haystack

22 April 0605, watching from blind. Details of watch on back when I arrived at 0605, I said hello and a non-♀523 ♀ (no chipped bill) looked out. That was the likely time ♀524 laid, as she was never in the hole again at a really suitable time. ♀523 laid at about 0650. Anyway, I saw both ♀♀ in & out of the hole at least twice before I check the nest 0815 and find 2 eggs, one runt & one normal (see nest record for details). Janet watched ^{for} some time after I did, and saw both ♀♀ in the hole several times each, and nobody threw eggs out.

What I presume happened is that ♀~~524~~ 524 laid the runt early, ^(her first egg) and ♀523 the normal egg later, and that egg-removal is now over here.

Lots of chasing & intruders while I was up here, perhaps involving ♀587. See Molly's notes, as she watched up here in the afternoon.

23 April Two more eggs laid today, and things are definitely over here. I watched from above the granary and got ♀-guarding data, on the back.

Here at 0555, once again ~~524~~ ♀524 is in the hole looking out as I arrive. She leaves 0607. Egg presumably laid prior to this time.

● 0641 ♀523 enters nest, immediately looks out

♀523 { Goes ~~down~~ 0653: She leaves ~~0703~~ 0703
lays { 08~~10~~10, No other birds had entered hole.

I checked the nest and found two more fresh

22 April 1982 Low Hay egg-laying

- 0605 ♀ (524?) looks out, flies off 15sec later
 0642 ♀523 at hole
 0648 ♀523 enters, ♂461, ♀524 come to hole, then fly off
 0653 ♀523 leaves

} ♀524 lays (?)

} ♀523
lays (?)

Both ♀♀ in briefly at other times,
 but unlikely that eggs were laid then

23 April 1982

Pre nesting data

- 0555 ♀524 in hole
 0600 ♀524 g | ♀523 ♂461 Ravine |
 05 " | " " " |
 10 core 3 g |
 15 ♀524 g | ♂461 ♀523 FT
 20 ♀523 ♀524 g |
 25 ♀523 ♀524 ♂461 g |
 30 core 3 watch tree |
 35 ♀524 ♂461 FT | ♀523 g |
 40 core 3 g |
 45 trio core 3 g (♀523 in hole) |
 50 " " " |
 55 ♂461 WT | ♀523 in hole ♀524 g |
 0700 core 3 g (♀523 in hole) |
 05 core 3 g |
 10 core 3 g |
 15 " " |
 20 " " |
 25 " " |
 30 ♀523 g | ♂461 ♀524 WT |
 35 " | " " " |
 40 core 3 g |
 45 core 3 g |
 50 core 3 WT |
 55 core 3 g |
 0800 ♀524 ♂461 WT | ♀523 g |
 05 ♂461 WT | ♀523 g | ♀524 off toward Hay Blom
 End watch.

♂461

F

♀523

||

FTF

||

MAF

||||

♀524

F

♂461

||

FTF

♀523

F

♂461

|

FTF

Melanerpes formicivorusLow Hay

(23 April) eggs: See the Low Hay nest records for more details. Once again, ♀524 laid before I got up here (before 0655) and ♀523 laid about an hour later.

Today, there were numerous intruders, but I saw no trace of ♀587. Also, during part of the time there was nearly constant karriting in the 2° area, and also across the ravine on Warners property. It seems that a male is being rather persistent over there, and they may yet try to branch off a new group.

So, 4 eggs here, 1 runt, 3 normal in the nest. Also, it appears from the guarding data that ♂461 is fairly well following ♀524 (see back of page 5), but he certainly isn't being fanatical about it. Molly had the same impression in her watch yesterday. I should be able to get one more morning's worth of data.

24 April 2 more eggs today (see nest record),

Watching 0540. At 0546, a non-chipped-billed ♀ looks out. Boy, (assuming this is ♀524) she is certainly laying early.

0600, ♀523 enters briefly, leaves immediately, ♀524 goes down.

0607 ♀524 looks out, then leaves.

Check nest 0615, one more egg, see nest record, #5

♀523 { 0710, both ♀524 + ♀523 enter, ♀524 looks out, leaves,
lays { 0715 ♀523 leaves

0720 check nest, one more egg, see nest record.

25 April One egg today, probably the work of ♀524 ^{See} Nest Record

24 April 1982

Low Hay

egg-laying behavior

0545 ♀524 nest |

550 " " |

555 " " | ♂461 ravine

0600 all 3 in g |

605 ♀524 nest | ♀523 2^og | ♂461 watch tree |

Melanerpes formicivorusLow Hay

- 26 April One more egg laid today, probably the work of ♀524, making 8 eggs and a probable skew of 5-3 (4-3 if normal eggs are counted). I suspect that the clutch is now complete, meaning May 6 would be a good day to look for hatching. May 28 for banding.
- 29 April Checked nest, still 8 eggs, ~~1245~~ 1245. So clutch was complete 26 April.
- 6 May Nestcheck 1715. Hatching! 4 eggs have hatched: 3 young from eggs ① ③ + ④ all marked with blue sharpie on the right leg. Egg ⑤ had just hatched... ^{the} ~~one~~ hatchling was still attached to the eggshell by the egg membranes. I took this as compelling evidence that that nestling was from egg ⑤, and I marked him with blue sharpie on left leg (and back + tail, too). The runt ② has disappeared already. too bad.
- 7 May Nestcheck, 1530: 6 young! Eggs ⑥ + ⑦ hatched today, and those young marked with blue sharpie on the right wing! Egg ⑧ not yet hatched. Young from yesterday remarked.
- 11 May Nestcheck, 0800 Still six young, but certainly one and maybe two are on the way out (see nest record for details). All the marks of 7 May still visible. No sign of egg ⑧, but the absolute runt (6 grams) was not marked, while the others (even ⑥ or ⑦, one on right wing, were visible. So I suspect that ~~at~~ one of ⑥ or ⑦ has already been carried out of the nest, and the super runt came from ⑧. This
→ means all 7 normal eggs hatched.

Melanerpes formicivorusLow Hay

17 May Checked the nest, 1445: Down to 5 young here, as expected, but all 5 seem to be doing quite well indeed. See nest record for details.

30 May Banded 5 feisty nestlings, now Juvs. 770-774.
See Nest record + Capture records

5 June Counted stores 1730:

2 ^o granary	<u>100</u>
1 ^o granary	<u>1600</u>
TOTAL	<u>1700</u>

Also, a nice looking juvenile was looking out of the nest hole when I arrived.

18 June ** GROUP UPDATE **

① ♀523 disappeared ~ 2 June 1982 Last seen at nest by Leslie 30 May. Gone by 4 June

19 June Up here watching for juveniles, and to be certain that ♀523 is gone, 0900 - 1020: Not a great watch. ♀524 the only adult seen for certain, but 3 juvs seen, ~~1000~~ J770 LBlue/m, J773 Red/pbrn, and a 3rd that I couldn't get the bands of.

3 July 0900 - 1000, watching here for juvenile dominance. Some success. On two occasions I saw J772 ^{Or/m} peck hard at J774 ^{yellow} Blk-LBlue/m, while ♀524 was nearby. J770 also seen. No evidence of a second nest.

15 July Poor watch here, 0715 - 0845, trying for juvenile dominance. No real success other than a possible 772 chasing 771 around the 2^o area a bit. That was quite iffy though, and didn't see it well at all. ^{census complete} ♂461, ♀523, ♀524, J770, J771, J772, J774 all there: ^{773 possibly gone}

	771	770	774	
† 772				Low Nax dominance through 21 Aug. See Alan's notes for more
771	:	:		
770				
774				

772 → 774 || 3 July

772 → 771 (1) ?? ^{very} iff, 15 July

772 → 770 ||

772 → 771 |

770 → ⁴774 ||

772 → ~~774~~ |
774

16 July

772 → 771 ||

772 → 770 |

772 → 774 |

19 July

A "hint", that

21 Aug

771 > 770 |

Another hint 771 > 774

Melanerpes formicivorusLow Hay

16 July Good watch here, 0730 - 0930: 7 dominance interactions! Basically, I saw J772 peck everybody (770 3 times, 771 once, 774 once), ~~and~~ so he is definitely the dominant juvenile. I also saw J770 peck at 774 twice, ~~and~~ so J774 is probably the subordinate juvenile. I still lack J771 - 774 and J770 - 771 interactions, before I get a full table. J773 is certainly gone

19 July 0720 - 0920, OK dominance watch. Didn't see either of the two interactions I need, but I saw J772 peck J771 3 times, and 772 pecks both 770 + 774 once each. ♂461 + ♀524 seen, but not ♀587.

28 July 0550, watching for juv dom. 0750, not very successful. All 4 surviving juvies (770, 771, 772, 774) plus ♂461 + ♀524. ♀587, however, is missing once again. A ♂ + ♀ NB intruder - were here early, but chased out.

16 Aug Counted stores, 0800:

2° g

Q

1° g

800800 TOTAL

Doing pretty well, considering the late date.

21 Aug OK watch here, 0720 - 0830: ♂461, ♀524, J770, 771, 774 all here, but ♀587 is now conspicuously absent, as is, surprisingly, the dom. J772. Both may well be gone. Also, I got a few very iffy hints about dom. 771 may be dom over both 770 + 774. Both gave way to 771 on branches. But by no means conclusive.

Melanerpes formicivorusLow Hay23 Aug

** GROUP UPDATE **

① J773 disappeared. 22 June ± 3 daysLast seen by RCM 82 06 19. Missing by 26 June20 Oct

Granary census, 0820-1020. Lots of acorns already stored

1020, Pretty slow, although a few good defense observations, including an intrusion by ♀648, formerly of Blom 1.

Complete census: ♂461, ♀524, ♀587, ♂770, ♂774 all seen well, and ♂771 seen fleetingly.

23 Oct

Another granary census, 1130-1330. Wow, one of the very best storing frenzies I've ever seen! 62 acorns in the first hour, 108 total for the two hours! Not bad.

Complete census, although ♂774 kept a very low profile throughout. He stored only one acorn! All the acorns were coming from the area S + SW of the granary. May have mostly been Blue oak acorns, but I wasn't sure.11 Nov

Granary census, 1400-1600. Very slow

1400 Nobody

05 "

10 "

15 "

20 "

25 "

30 "

35 "

40 "

45 ♂461 ♀524 NA

50 ♀524

55 "

1500 "

05 "

10 "

15 "

20 "

25 ~~unusually~~ ♂461

30 ♂461 ♂771 ♂774

35 ♂461 ♂771

40 " "

1545 ♂461 ♂771 ♀524

50 ♂461 ♀524 ♀587

55 " " " ♂771

1600 " " " "

Storage

♂771 : : 1 ①

♀524 : : 1 ①

TOTAL ② $\frac{1}{h}$

20 Oct 1982 Low Hay granary census 0820 - 1020.

0820 nobody
25 "
30 "
35 ♀524 EA 1°
40 nobody
45 "
50 ♀587, ♂771 SA | others 1°
55 nobody
0900 "
05 ♂461 1°
10 ♂461 1°
15 nobody
20 "
25 "
30 ♂461 1°
35 ♂461 1°

0940 ♂461 1°
45 nobody
50 "
55 "
1000 "
05 "
10 "
15 ♀524 WS, ♂774 1°
20 ♂774 1°

Storage
♀587 1 : (1)
♂771 1 : (1)
♂461 1 : (1)
(2) (1)

defense:

0835 ♀524 ♀648 1
0904 ♂461 unid pass, 1
0906 ♂461 unid pass, 2
1015 ♂461 nuthatch 1

23 Oct 1982 Low Hay Granary room 1130-1330

1130 ♂461 SA
35 ♂461 ♂770 SA
40 nobody
45 ♂774
50 ♀524 SA
55 ♂770 SA
1200 ♀524 ♀587 ♂771 SA
05 ♀524 ♀587 SA
10 ♀587 ♂461 SA
15 ♂770 ♀587 ♂771 SA
20 ♀587 WS | ♀524 WS ♂461
25 ♀524 EA | ♀587 ♂770
30 ♂771 WS | ♀524 ♂770

1235 ♂461 ♀524 SA
40 ♂770 ♂771 SA
45 ♂770 ♀524 SA
50 ♀524 SA ♂774
55 ♀587 ♂461 ♂771 SA
1300 ♀524
05 ♂461 ♀587 SA | ♂774 EA
10 ♂771 SA
15 ♂770 SA ♂461 MA
20 ♂770 SA ♂461 MA
25 ♀524 ♂770 SA ♂461 MA
30 ♂461

1st h. 2nd

Stokke ♂774

♂461 HTT/II
♂770 HTT/III
♀524 HTT/III
♀587 HTT/II
♂771 HTT/III
Unk III HTT/III
HTT II

1200 ♂771 Stokke 2

Storage ♂461 (14)
♀524 (15)
♀587 (15)

♂770 (23)
♂771 (14)
♂774 (1)

Unknown (26)
TOTAL (108)

62 1st h. 46 2nd

Melanerpes formicivorusLow Hay

16 Nov Totally useless granary census: No birds seen at all.

21 Nov Trying again, 1045. Good watch! All 6 birds seen well, a decent bit of storing, too.

2 Dec slow granary census, 0810-1010. Picked up a bit, late.

→ Saw ♂ 774 face away + chatter to ♀ 524! Only

~~♂ 774~~ ♂ 770 not seen.

16 Nov 1982 Low Hay Granary census 1425-1625

1425 nobody	1530 nobody
30	35 "
35	40 "
40	45 "
45	50 "
50	55 "
55	1600 "
1500	05 "
05	10 "
10	15 "
15	20 "
20	25 "
25	

21 Nov 1982

134 10 hr

1050 nobody
 55 ♂461 ♀524 MA
 1100 ♂461
 05 nobody
 10 ♂461 SA
 15 ♂461
 20 nobody
 25 ♂461
 30 ♂461 ♀524 SA
 35 nobody
 40 "
 45 "
 1150 "

1155 nobody
 1200 "
 05 ♀587 ♀524 ♂461 SA
 10 ♂461
 15 ♂771 ♀587 ♀524 SA
 20 ♂771 ♂774 ♀587 MA
 25 ♀524 ♀587 ♂770 SA ♂461
 30 ♀524 ♀587
 35 ♀524 WH
 40 ♀524 WH
 45 nobody
 50 "

	1st hr	2nd hr
⑥ ♂461		
⑥ ♀524		
② ♂770		
④ ♀587		
② ♂771		
① ♂774		
②① total		⑦ ⑭

1208 ♂461 Passenger 2
 1220 ♀587 AU 2
 defense
 1230 ♀524 ♀NB 2
 ♀587 ♀787 2 (1800)

20 Dec 1982

0810 ♂774
 15 "
 20 "
 25 "
 30 "
 35 nobody
 40
 45
 50
 55
 0900
 05
 10
 15
 20
 25
 30
 35 ♀524 SA
 40 nobody
 45 "
 50 ♂461 ♀524 SA
 55 nobody
 1100 ♀524 SA
 05 nobody
 10 ♀524 SA

Storage

all hr 2

♀524		⑦
♂461		⑤
U		

(12 total)

Melanerpes formicivorusBlom One

3 March Miracle of miracles, I walk up here at 0920 and immediately locate the usually hard-to-find ♀649 wht / DBLue and ♂492 Orange / Black, in the mistletoe-covered Valley Oaks on the "Live Oak Knoll", north (200m) from the granary.

0945, Both birds now in the granary, no evidence of anyone else around. End watch 0950

5 March Given the developments (disappearance of ♂493) at Blom 2, I decide to give another look here to see if ♂493 might have rejoined ♂492. It doesn't look like it. Again, I see ♂492, ♀649, and no evidence of any other bird around.

8 April Nobody in holes, but plenty of acorns here, 1730.

2 May Walking past at 1730: A bird (♀ I think) in the 1981 aborted nest hole, and before she looked out I heard tapping, on the inside

9 May Checked the 81 hole here, 4 eggs, quite fresh (see Nest record). Alan reported ♂492 in the hole here only half heartedly yesterday, so I would suspect incubation has just begun. This means 20 May would be a good day to expect hatching, and 11 June banding.

20 May After Alan's report of starling activity in the nest, and then no incubation, I check the hole at 1200 to find that it has failed! No eggs, but a lot of starling nest material + shit. Was the starling action a cause of the nest failure? Impossible to determine. See Alan's notes for details. ~~Acorns~~ Acorns still present

Melanerpes formicivorusBlom One

4 June I say "hello" to all the holes I know about here, 1400. Doesn't appear to be a second nest around.

8 June Whoa! Over here at 1100, I find a bird looking out of the low hole in the large douglasii-lobata hybrid, 50 m ~~W~~SW of the granary.

9 June At 1700, I climb up to the hole, open it, and find 4 eggs, ~ day 2-3. See nest record for details. This means I should look for hatching on 18 June and banding ~ 8 July.

23 June Checked the nest, 1230: 4 Nestlings, 3 in pretty good shape, but one runt definitely on the way out. See nest record.

19 July Walked by here, 1030. Walter had banded 3 nestlings here 10 days ago, but I find nobody looking out of the nest hole. They could have fledged, I suppose. A few acorns still remain in the granary. Leaving, I flush a nestling from the blue oaks along the road at the "summit"

24 July Both ♂⁴⁹² M/Red-wht and ♀⁶⁴⁹ LBlue-DBlue/LB seen here in passing at 1715, but nobody else.

17 Aug A surprising coup here at 0730. I stroll up over the knoll and manage to spot all 3 juvs in the trees above the granary: J830 M/Red-wht Red-wht/Red-wht, J831 LBlue-DBlue/LB DBlue-LBlue/M and J832 DGrn/LPnk. Also ♂⁴⁹² M/Blk and a ♀ (presumably ♀⁶⁴⁹) before they all flew off to the Live Oak Knoll. Blom 1 is out of stored acorns.

8 Oct Cast several times here I've flushed birds out of the 79-80 hole, but a watch here convinces me that there's no nest. Only ♂⁴⁹² seen.

1982 R.L. Munne

Melanerpes formicivorus

Blom 1 Nest Record

9 May ♀ looking out of 81 aborted nest hole in granary 1430.
Climbed up, opened hole 4 eggs
eggs quite fresh, probably 1 laid today

13 May Checked hole, 1700 4 eggs

20 May Checked hole 1200 Nest failed -- eggs all missing
Lots of Starling nest material in the hole

8 June 1100, Bird looking out of low hole in the lobata x douglasii
hybrid, 30 m swot granary.

9 June Opened hole, 1700: 4 eggs

(all ~ 2-3 days)

①	27.7 x 20.2
②	27.5 x 20.5
③	26.9 x 20.5
④	27.2 x 19.9

} all hatched!

23 June 1230

4 nestlings

① Yellow-L Blue

② D Pink

③ D Brn-L Pktr

④ NB

31.5g

27.0

27.0

9.5g

3 nestlings banded (see Walter's notes)

Melanerpes formicivorusGazebo

- 3 March Alan + I watch here briefly, 1130. I find ♂571
L Blue - Bk / L Blue
plus a few others that I couldn't see.
- 5 March Trying again here, 0930. ♂516
Cbrn - wht / Cbrn
" " / " Seen right away in the granary area.
D Blue - Yellow / D Blue ♀653
I'm watching from E end of pond
1045, success! ♀570 Mauve / M also here. Though
♂571 not seen today, he was here 3 March. End 1100.
- 8 April A quick pass, acorns still present, 1800
- 13 April Alan + I swing by at 1500, I see ♀570 mauve / M
and two ♂♂, one Metal /
- 26 April Alan reported a bird flushing out of the '81 nest tree
yesterday: I come by at 1040 and do the same: I flush
a bird out of a hole out of the highest live limb in the
tree. It wouldn't be hard to climb to, but it is a
thin, long branch, and there is a hole beneath it (i.e.,
the limb is hollow). I'll have to think about it. Otherwise
it would require two lengths of extension ladder.
- 27 April Well, I decided to gamble + climb to the hole. Not
easy and extremely uncomfortable to hang there, but I
manage to open the hole: 6 eggs, one fairly fresh,
the others already opaque. I would guess that 6 May
would be a good date to expect hatching, and 28 May
(barring further developments) for banding.
- 3 May I stroll by at ~~1130~~ 1745, Nobody in the nest hole.
Have I caused abandonment?
- 5 May Another walk past, 0900: No problem. A ♀ flushes
from the hole, and ~~all~~ I heard no babies when it flew.

Melanerpes formicivorusGazebo

11 May Checked nest, 0945. 5 not-too-bad-looking babies.
No sign of 6th egg or nestling. The nestlings looked
a bit thin, perhaps, but there were certainly no runts.
One weighed ~ 20g, so I guessed them to be 6 days
old or so, meaning my guess of 27 May banding
was pretty good.

21 May Well Gazebo has blown it again! Leslie watched here
yesterday and saw no feedings in 1 hr. Sure enough,
at 1200 I check the hole and find the remains of
3 dead nestlings, moderately decomposed, about 12 days
old at death. So I would guess nest failure occurred
18 May or so. Starvation certainly is the likely cause.
However, Gazebo is not out of acorns: ~ 100 or so
left. Certainly not many, but no excuse to let the
nestlings starve. Just like last year. Interestingly,
two of the nestlings appeared to have been partially
eaten! The head of one was entirely missing, and
it appeared that viscera of the other was missing.
Hmm! Also, while I was here I heard a lot of
chatters + wakas coming from the fence line. And I
briefly saw 5 birds here! It will be worth watching
here before too long. 1250, just as I'm leaving I
confirm ♀ 653 Grn-wht / Lbrn + ♂ ~~516~~ 516 ^{DBlue-yellow / DBlue}

4 June Gazebo's not dead yet! At 1430 I flush a bird out of
the low 1980 hole. I climb up + find 6 eggs including
one runt. Eggs all about 4 days, meaning I should anticipate
hatching on 12 June and banding on 3 July!

Melanerpes formicivorusGazebo

- 8 June Routine nest watch here, 0740 - 1040: ♂516, ♂571, ♀653 all took turns at the nest, but I saw no sign of ♀570: That would be too bad if she is gone, since I would like to get more data on the nest contributions by ♀ helpers that are unrelated to the breeding ♀. ♂571 ~~the~~ incubated a lot today, in keeping with his now presumed breeding status.
- 10 June Another routine nest watch, also one on 9 June. Pretty clear now that ♀570 is probably not around. ♂516, ♂571, ♀653 the only birds here. Also, ♂516 did a late incubation bout + stayed in, so ♂516 roosted in the nest.
- 16 June Checked the nest + banded the young nestling here. 4 nestlings, 3 of which looked pretty good, one of which looked ~~newly~~ marginal. No trace of the two other eggs/nestlings, one of which was a runt. See nest record for details.
- 18 June ** GROUP UPDATE **
- ① ♀570 disappeared ~ 10 May 1982 ± 1 month
Last seen here 13 April: Clearly gone by 8 June.
- 3 July Surprisingly all 4 nestlings still alive + doing OK. They were banded √ 819 - 822. See nest record for details.
- 9 July Stroll by here at 0940. I find ♂571, of all things, pounding away at the feeder (= gazebo). Not sure what he was after. I also flushed a fledged juvie, but didn't see any bands. Also, Gazebo is certainly + without question OUT of acorns.

1982 R.C. Mummé

Melanerpes formicivorus

Gazebo Nest Record

25 April Alan flushes bird from new hole in '81 nest tree

26 April I do the same, 1030

27 April Open hole (a bitch), 1345

6 eggs

clutch complete, eggs

one fairly fresh, others

not measured or numbered.

4-5 days old

11 May Nestcheck, 0945

5 babies

~ 20g, (6 days?)

21 May Nestcheck, 1200

3 dead nestlings

Nest failed ~ 18 May.

4 June Flush bird from low 1980 nest hole, 1430

Opened hole

6 eggs

(1 ~~run~~ runt, 5 normal eggs, ~ 4 days)

16 June 1500

4 nestlings

(no sign of 5th normal egg or runt)

→ 819

→ 820

→ 821

→ 822

① Or-L Blue

② Red-B/K

③ B/K-Yel(N)

④ NB

wt 22.0g

22.5

16.5

13.0

3 July

wt 73.0g

74.0

78.0g

69.0g

1645

wing 76

80

66

55

crow's 2

1

3

4

All 4 nestlings banded & bled, J819-822

Melanerpes formicivorusGazebo

17 Aug A quick + partially successful watch, 0830 - 0930.
 All 3 adults (σ^516 , σ^571 , $\text{♀}653$) seen well, plus 1 juv.
 J821 ^{Orange / DBlue-wnt (V)}

7 Oct 1345, watching here. First bird I see is none other
 than $\text{♀}570$ Mauve/M, Back after an absence of ~6 mos.
 where she's been, and why she's returning now (if
 indeed she is: could be just "visiting") I don't know.
 Also saw $\text{♀}653$ ^{Grn-wnt / L Grn} and J822 M ^{Blk-L Green} / L Grn,
 probably in σ plumage, but it might be a bit early to
 tell for him. At least one adult σ M / seen, but that
 could be either σ^516 or σ^571

3 Dec After a long struggle, 1145 - 1330, I finally pull off
 a complete census: σ^516 , $\text{♀}653$, $\text{♀}570$, $\text{♀}819$
 (I think ♀), $\text{♀}820$ (for sure ♀) σ^821 + σ^822
 (Both sure σ). Only bird missing was, of course,
 σ^571 , who has moved to Hay Blom.

The strange thing is that there was a lot of activity
 in the old storage trees between Gazebo + Blom 3.
 Lots of NB birds, plus a few boated birds from
 Gazebo ($\text{♀}819$), CV Grade (σ^718), and Blom 3
 (σ^768 of Blom 3). No idea what the commotion was
 all about. A fair amount of chasing, territs, uwakas.

1982 R.L. Mumme

1

Melanerpes formicivorus

Blom Two

3 March Alan watching here 0915-1000, reports at least one and maybe two ♂NB's here. Uh-oh!

1017, while Alan watches from the usual spot, I sneak over to the granary. I immediately find a ♂NB and ♀478, Metal/DBlue-Or. So it looks bad for ♂493. I just watched at Blom-one, and saw no evidence of three birds there.

Acorns still present here, but not any great number.

5 March 1130, Alan may well be correct about 2 ♂NB here. I find 2 ♂♂, one certainly UB, in a Valley Oak 75 m N of the granary. 1200, Absolutely! 1 ♂NB has a smooth white line, left side of face, the second has a nice dark whisker. Confirm 2 ♂♂ here. ♀478 also seen. Will have to catch these devils! 1205, both in the granary-nest tree together.

10 March ** GROUP UPDATE **

♂493 disappeared 15 Jan 1982 ± 6 weeks

Last seen on 20 Nov 1981. New ♂♂ present on 3 March had obviously been here for some time.

♂♂ 858, 859 move to Blom 2 15 Jan 1982 ± 6 weeks

These ♂♂ probably did not boot ♂493 off. ♂493 definitely gone, or we would have seen him back at Blom 1 or 1500.

8 April Alan had reported starlings in the 1980 nest hole here, so I climbed up to take a peek. It was free of all starling debris, but after coming down I saw a starling fly into (+ stay in) the hole above. Acorns still present. At roosting it seemed like 1 bird roosted in the nest hole + two roosted in the "other" (more westerly) hole branch in the same tree.

Melanerpes formicivorusBlom 2

- 14 April Successful ambush here today, netting ♀478 plus the two ♂NB, hereby christened ♂717 + ♂718.
- April Power struggle here, involving ♀♀695 + 696 from 1800, but won by ♀578 of Road 1! See Alan's notes for the goodies.
- 11 May Walked by here 1030, flushed 2 birds out of the opened hole (1980 nest) in the roost tree. I climbed up + peeped in, but found no eggs.
- 13 May Watching here 0840. Flushed 2 birds from the roost tree as I walked up. All 3 birds here (♂717, ♂718, ♀578 all seen well) and it looks like a bit of mate guarding is going on. See reverse
- 15 May Alan watching here last two days, reporting mate guarding and '80 hole visitation. I check the hole 1040, still no eggs, but it should be soon.
- 17 May Checked the hole, 1630: Still no eggs. Gave the birds ~ 10 acorns, placed in various holes of the nest tree. Otherwise, they appear completely out of acorns.
- 20 May Checked the hole, 1100. Still No eggs! The acorns that I placed here 3 days ago are all gone, so I put ~ 25 more (all Valley Oak) in various holes. I would like to have this group nest.
- 22 May Checked the hole, 0830: Still no eggs, and all the acorns I gave them seem to have been eaten. I'm starting to have doubts about Blom 2 nesting. Nonetheless, I saw ♀578, and saw her followed by 2 ♂♂, so they are still guarding.

13 May Blom 2 Mateguarding

0850 nobody

55 all 3 NT |

0900 nobody

both ♂♂

♂ 717

♂ 718

~~Went to~~

F

FTF

MAF

|||

1 (Intruder)

1

05

10

15

20

25 all 3 NT |

30 all 3 NT

35 all 3 gra-ary area

40

45

50 all 3 NT

55 all 3 NT

1000 all 3 NT

05

10

15 all 3 Blue Oak

Melanerpes formicivorusBlom 2

24 May Shows you what I know! I peep in the hole ⁰⁹⁰⁰ ~~1000~~, and find 2 eggs, certainly, laid yesterday and today. So even with an absence of acorns, Blom 2 is nesting away. How about that?

25 May Opened the hole, ⁰⁷⁴⁵ ~~0845~~: 3 eggs, so another one laid this morning. I number the eggs 1-3, but this, of course, has no bearing on laying sequence.

26 May Peeped in, ¹⁸⁴⁵. 4 eggs. So one a day, starting on 23 May. Alan reports end of ♀-guarding and beginning of ~~nest~~ incubation.

30 May Checked hole to measure eggs, ¹¹⁴⁵. 3 eggs. So once again, an egg mysteriously disappears during incubation. See nest record for measurements. The egg that disappeared was not the one laid 26 May. Anyway, this means that the clutch was certainly complete on 26 May (Alan reports that incubation did not really begin until then, meaning 7 June would be a good day to expect hatching, and 28 June for banding).

11 June Checked nest ¹³⁰⁰: 3 fairly healthy nestlings, ~5 days old, meaning all 3 eggs hatched. ~~But~~ The well-being of the nestlings was somewhat surprising, given the absence of acorns here. The nestlings looked a tad thin, but not bad at all, really.

15 June Oops! At 1600 I find the nest here failed. Totally empty! No dead babies, nothing! Could have been predation I suppose, but the lack of acorns is certainly compelling.

Melanerpes formicivorusBlom 2

(15 June)

As is usual in these cases, we will never know for sure.

Alan watched here on 13 June and saw no feedings, so the failure must have occurred suddenly between 11 + 13 June.

Also, 13 + 14 June Walter was watching at Corral Viejo Grande, the group with the huge granary at the mouth of CV canyon, and he saw ♂ 718 there on both days, and apparently a member in good standing! This would strongly suggest that CV grande is the natal group of ♂ 717 + ♂ 718, which was certainly ~~very~~ suggested by my observations of these birds flying off in that direction while watching roosting at Blom 2 in Feb + March. Also it suggests that at least ♂ 718 is thinking about returning home, if he has not done so already.

18 June

GROUP UPDATE **

① ~~♀ 478~~ ♀ 478 disappeared ~ 20 April 1982Last seen by Alan 15 April. Powerstruggle in progress 25 April.② ♀ 578 moved here from Road 1 25 April 1982seen participating (& winning) PS here on 25 April19 July

Strolling by 1000, No activity here. Blom 2 is probably abandoned. See Alan's notes on Blom 2 and the return of ♀ 578 to Road 1.

24 July

1 adult + 3 Banded juvies here at 1800:

J Blk-Yel / Red-Yel

CPink / M

+ J DPink / Mauve

♂ NB

M / Or-Red

J Or-Red / Wht.

These are certainly J 767, J 768, J 769 of Blom 3, with a ♂ NB. I flushed all of them, and all took off toward Blom 3. Thus, it's pretty clear that Blom 2 is still abandoned.

Melanerpes formicivorusBlom 223 Aug

** GROUP UPDATE **

① ♀578 moved back to Road 1 18 June $\pm$ 5 days
 Last seen at Blom 2 on 13 June, Back at Road 1 22 June

② ♂717, ♂718 Abandoned Blom 2 18 June $\pm$ 1 week
 Last seen at Blom 2 8 June, missing 13 June, clearly gone 26 June
 Blom two was clearly abandoned by 26 June

Nest failed $\sim$ 13 June $\pm$ 2 days. Walter saw
 ♂718 at Corral Viejo Grande (presumed natal territory)
 around this time, too. See his notes.

Sept
29

Walter has reported birds in a hole in a VO near the head
 of Dark Hollow canyon (see map on back). I come up
 here at 1020 and find a ♂NB and a ♀NB hanging
 out in the wooded areas ^{North} east of the head of dark hollow
 ravine. No granary up here that I can see. After
 watching a while, it seems unlikely that these birds
 have ties to Blom 2. Blom 3 is a possibility, however.

1110, at Blom 2 proper, I can't find any birds
 at all. Looks like it may not be occupied this fall, unless
 somebody comes in soon.

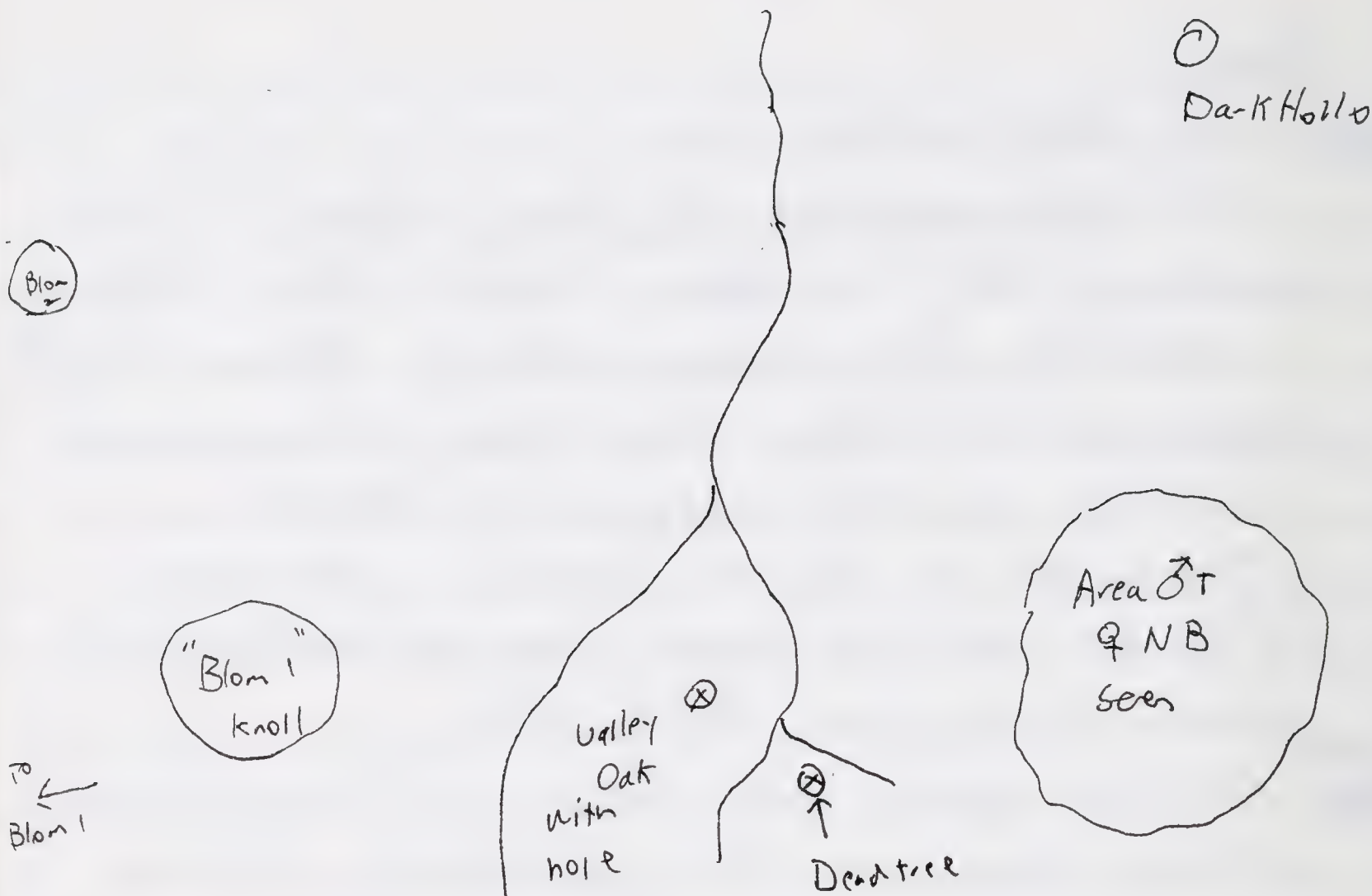
Oct
8

May have to beat my words. Watching here 1530-1700.
 After a long wait, I finally see a ♂NB in the granary
 nest tree. Saw him store an acorn, and even briefly enter
 the nest hole. Looks for real. Also thought I saw a ♀NB
 here, but not certain.

9 Oct

Watching the "new" group described 29 Sept, and ♂ + ♀ NB
 still here, in same area, defending trees against Juv Intruders!
 (probably Blom 1 Juvies). A real group with no granary
 (like Knoll set)

29 Sept 1982



Melanerpes formicivorusBlom 2 Nest Record

- 22 May Peeped in old 1980 nest hole, 0830: No eggs
- 24 May Peeped in, 0900 2 eggs
(first egg laid 23 May for sure!)
- 25 May 0745 3 eggs
(numbered ① - ③)
- 26 May 1845, peeped in 4 eggs
- 30 May Checked hole, 1145 3 eggs!
Egg ② missing!
all hatched { ① 24.7 x 19.4
③ 25.1 x 19.9
④ 25.3 x 19.7 (laid ²⁶ ~~28~~ May)
- 11 June Checked nest 1300 3 nestlings
~ 5 days' old
- 15 June Checked nest, 1600: Failed
Completely empty, no trace of nestlings.

Melanerpes formicivorusBlom 2

27 Oct I stroll by here at 1530, and finally find a few acorns stored in the nest tree. Still none in the secondary area, though.

1615! After a long wait I see two birds, I'm pretty sure a ♂NB and a ♀NB. Will have to ambush here before long.

8 Dec A stroll by, 1430, reveals a ♂NB and a ♀NB. Still very few acorns here, however. Also, I took a 30-min look around "Cañon Vista" and it looks like the birds there may have moved on. No sign of any wicker life.

On 3 Dec, while watching at Dark Hollow, I saw a bird up in the CVista "roost hole tree" (see Walters notes), but that could have been a straggler from elsewhere. Also, the dead tree at the head of the CVista ravine has fallen (probably during late Nov. storms).

Melanerpes formicivorusBlom 38 Dec

Alan has reported stored acorns (!) in one of the old storage trees ~~in~~ in the "hollows" between Blom 3 and Gazebo. At 1500, I con-c over and sure enough, find 12 or so acorns in a large VD in the bottom of the hollow closest to Gazebo + CV Grade. This is where I saw a lot of wicker activity on 3 Dec (see Gazebo notes). Today things are quiet. At least 3 birds are hanging around here, though: A ♂ NB, a ♀ (?) and ♂ Juv 768 Or-Red/Wht-Red. ~~Blom 3~~ (of Blom 3). My current guess is that the birds hanging out here are all Blom 3 birds (they seem to be shuttling back and forth), and all the power-struggle-like action I saw on ~~Blom 3~~ 3 Dec was territorial squabbling. However, it would be nice to get more Blom 3 birds banded. I watched roosting here last night and saw 3 birds roost in the "low" 1982 hole and 1 roost in the "high" 1982 hole.

9 Dec

Very successful ambush here, netting 1 bird (♂ 839) in the upper hole + 5 birds (♂ 840, ♀ 841, ♀ 767, ♂ 768, ♂ 769) in the lower hole. This may be all the birds in the group, but watches are needed

Melanerpes formicivorusBlom 3 Nest Record

- 2 May ♂ looking out of upper hole of the Blue Oak hole tree:
Peeped in, 1800: 5 eggs
- 5 May Opened hole, 0930 5 eggs
~ 8 days
- 11 May Walked by 1000. Eggs have hatched.
- 20 May 1630, heard babies while walking by
- 30 May 1100 Banded 3 young, J 767 - ~~769~~ 769
- June (fledged juvs seen here ~~later~~ in passing)
- 2 July 0915, adult flushed from lower hole in the Blue Oak hole tree
Opened hole, 0930 4 eggs
quite fresh, no more than 2-3 days at most
- 19 July 0945, Nobody in hole, no baby noises. Failed?
- 24 July Checked hole, 1730. Still 4 eggs NEST ABANDONED
One egg broken open, nice intact, undeveloped yolk. Suspect abandonment occurred on or shortly after 2 July. Eggs still marbled + quite fresh, as they were then.
3 eggs returned to nest, on-off chance that they represent a new clutch.
Acorns still present!

Juvs 767, 768, ~~769~~ 769 all seen at Blom 2, 24 July,

Melanerpes formicivorusDark Hollow3 March

Over here with Alan, 1030 we do well. ♀509 ^{M / L Grn - Dbrn} L Grn - Dbrn / yell for sure, and ♂584 ^{Metal / B Pink} pretty sure. A few intruders around when we first walked up, but they were quickly chased away toward CV2.

Birds are doing very well here, acorn-wise. Surprisingly well, in fact, for a marginal territory. Probably 1000 or more acorns, primarily in the low limb ^{three} (southerly) of the 2 VOs. Almost all Live Oak acorns, probably from the Large Live Oak 50 m W of the granary that had such a heavy crop last fall.

8 April

A quick look here, 1800, ♂584 ^{M /} presumed here. plus a ♀. Acorns still stored here.

3 May

a stroll by, 1830: Nobody in any holes.

13 May

Whoops, 1720, walking over here to look for a nest, I see 3 birds open wing, waiting, mounting in the granary! Looks like the tail end of a power-struggle! With no scope, I'm not sure what I can learn here today.

21 May

Watching here 1000. Alan learned on 14 May that ♀695 + ♀696 of 1800 had moved here! ♀509 is gone.

1100, All 3 birds here, seen well: ♂584, ♀695 ♀696. What's more, the birds here are prospecting a hole: ♂584 was in tapping for ~ 5 minutes, then ♀695 entered, flew out with wood chips, then entered again and looked out for 10-15 min. ♀696 also took a couple of looks at the hole. The hole is not great for getting up to, but is not too bad considering what's available for this group. It's in the more northerly of

Melanerpes formicivorusDark Ittollow

(21 May) the two main Valley Oaks, in a dead stub pointing toward the other tree. You can climb up to the stub without any trouble, but I wouldn't trust hanging on the stub (at least not for the moment). However, there is a nice strong branch directly over the stub, so we should be able to work something out.

22 May Watched here, 0640-0720: All 3 birds present, still a great deal of interest in the same hole (all birds in at least once, ♂584 removing wood chips). I figured out a fairly painless way to get to the nest using only the short rope ladder. I peeped in at 0800 and found nothing yet, but ^{every} ~~all~~-day watches should be the norm now.

23 May Watching here 0540: 0700, Still a lot of interest in the hole, but ♂584 was the only ^{bird} in for any length of time. 1 ♀ zipped in briefly once, and both ♀695 + ♀696 looked in. Will watch again tomorrow.

24 May Watching 0545. ♀695 was in the hole looking out when I walked up, but she left immediately. 0700, were getting there. ♀695 was in the hole twice more, but she looked out virtually the entire time she was in. ♂584 zipped in 2 times, and ♀696 looked in twice.

25 May Watching, 0550-0700. Birds zipped in and out all the time, but I peeped in the hole at 0715, Still no eggs.

Melanerpes formicivorusDark Hollow

26 May Watching, 0540 - 0700. More quick visits by all 3 birds, but nothing substantial.

28 May Watching here 0540 after shamefully skipping yesterday.

0608 ♀696 ^{or-whit} enters hole. looks out for a few seconds at 0613 + 0615.

0619, ♀695 ^M enters. 0620, ♀696 ~~leaves~~ leaves nest. ♀695 does not leave nest hole until 0657.

0700, I check ^{+open} the hole + find 1 egg, a runt, 20.5 x 15.3! Unfortunately, both ♀♀ were in the hole simultaneously while it was being laid. The runt had an off-center air cell, but it is not possible to say for sure who laid this egg. ^{I suspect ♀695, since she stayed in the hole longer}

0800, watching again. 0918 ♀696 enters. 0920 ♀696 leaves, without egg.

0920, ♀695 ^{M/mauve} enters. 0921, ♀695 leaves nest, carrying the runt egg! Egg is carried to the high branches of the adjacent Valley Oak, but I lose track of it there.

Unfortunately, there is no way to say for sure what happened here, other than somebody laid a runt egg, and ♀695 carried it out. Maybe we'll be able to figure out some of the details tomorrow.

29 May Watching the nest here 0525 with Molly.

See the back of this page for the details.

Basically, both ♀♀ were again in the nest simultaneously when two eggs were laid, ① was a runt: 18.7 x 14.7

Dark Hollow egg-laying watch, 29 May 1982

0525 watching hole

0548 ♀695 enters, followed by ♀696
♂584 looks in, flies off

0542 ♀696 leaves

0550 ♀695 looks out ~20sec

0551 l.o., b.d. ~5sec

0552 l.o., b.d. ~5sec

0553 l.o., b.d. ~5sec

0553 l.o., b.d. ~20sec

0555 l.o., b.d. ~5sec

} responding to garricks being given by ♂584

0555 ♀695 leaves

0600 checked nest, No eggs!

0605 watching again

0625 ♀696 enters

0631 ♀695 enters (both ♀♀ in)

0640 ♀696 looks out (smudge on forehead,
heavy mustache)

0645 ♂584 enters (all 3 birds in)

♂ looks out fairly constantly,
with brief trips down

0658 ♂ leaves

♀696 leaves

0700 ♀695 (no smudge, faint mustache) l.o.

0705 ♀695 b.d.

0709 ♀696 enters

0710 ♀696 l.o.

0712 both ♀♀ leave

0625 - 0658 ♀696 lays

0631 - 0712 ♀695 lays

0715 Nest check: 2 eggs, one runt, one normal

0730 Alan, Molly take over forme

Melanerpes formicivorusDark Hollow

(29 May) very heavily "marbled" appeared (heavily streaked). ^{no air} cell
 ② was normal 25.2 x 19.2, off-center air cell.

I think it's safe to conclude that the ♀ that laid yesterday's runt laid today's normal egg, since as far as we know, runts are only laid as the first egg of a clutch. Also, yesterday's + today's runts were quite different, size-wise. But who laid which? No way to know.

→ Alan + Molly watching here, ⁰⁷³⁵ ~~0735~~, Alan reports ♀695 throws out both eggs at 1015. See Alan's notes

30 May Watching here 0548. Egg laying details on back. Basically, 2 eggs were laid simultaneously by the two ♀♀ between 0615 + 0655. At 0700 I checked the nest + found 2 eggs. ① 25.0 x 19.2 (no air cell) ② 24.8 x 19.9 (off-center air cell)

Also, the two eggs were absolutely side-by-side.

End 0730

31 May Watching • 0605. Details on back. Basically, the 2 ♀♀ once again laid simultaneously. And once again, the eggs have consistent differences ③ 25.9 x 19.5, (no air cell at all) ④ 24.5 x 19.7 (off-center air cell.) If I can ever reliably determine the ownership of just one egg, I should be able to figure out what happened here. Maybe tomorrow I'll get lucky.

30 May 1982

Dark Hollow egg-laying

0548 ♀ 696 enters

0552 ♀ 696 leaves

I check nest, EMPTY!

0602 watching

0614 ♀ 696 enters

0618 ♀ 695 enters

0645 ♀ 696 looks out, leaves (♂ 584 garricking)

0655 ♀ 695 leaves

0700 Checked nest 2 eggs

} ♀ 696 lays (0614 - 0645)
} ♀ 695 lays (0618 - 0655)

31 May 1982

DH egg-laying

0605 watching

0607 ♀ ⁶⁹⁵~~696~~ enters

0615 ♀ 696 enters

0625 ♀ 696 looks out

0639 ♀ 696 b.d.

0640 ♂ 584 enters, looks out

0654 ♂ 584 leaves

♀ 695 l.o.

0700 I go to check nest, 2 more eggs (4 total)

♀ 695 lays, (0607 - 0700)

♀ 696 lays (0615 - 0700)

Melanerpes formicivorusDark Hollow

1 June I finally get lucky here. By 0650, only one egg had been laid, certainly by ♀695!
 (5) 25.9 x 19.7. It totally lacked an air cell, and had the same heavily marbled appearance as the runt of 29 May. I presume either ♀696 is through laying, or her last egg will come in later today. Egg-laying details on back.

Thus, because of the consistent differences in eggs, I think we can fairly comfortably conclude that (1) ♀696 laid runt on 28 May (tossed by ♀695, + (2) ♀696 laid normal egg, ♀695 laid runt, on 29 May (both tossed by ♀695). Ah, success!

2 June Checked the hole here, 0600. 6 eggs, The new one (certainly laid yesterday by ♀696 given the early hour) was (6) 26.0 x 19.0, with an off-center air cell! Just as I hoped. Thus, it is certain that ♀696 laid late yesterday, and (6) was almost surely her last egg. ♀695 may lay one more today, but I suspect that this will be the last day. Thus, 13 June would be a good date to expect hatching, and 5 July for banding.

4 June One last hole check 1545. 7 eggs, the seventh, probably laid late 2 June by ♀695, 25.9 x 18.9, again lacked an air cell. Actually, all the eggs that lacked the cell when laid were beginning to develop then now. Anyway, clutch complete 2 June, 4-3 in favor of ♀695.

1 June 1982

Dark Hollow egg-laying

0605 ♀695 in hole, looking out

0610 back down

0615 I go to hole, scare ♀ out, check hole,

Still 4 eggs (no new one)

0625 back watching

0628 ♀695 enters

0639 I move closer, ♀695 looks out

0645 I climb up to check nest, ♀ leaves

} ♀695 lays - 0628-0639

5 eggs, (5) certainly laid by ♀695

Melanerpes formicivorusDark Hollow Nest Record

<u>28 May</u>	0700, opened the hole (see notes)	~~1 egg~~ ① <u>20.5 x 15.3</u> (♀696?) (thrown out later by ♀695, see notes)	1 runt egg
<u>29 May</u>	0715 checked the hole	(♀695?) ① <u>18.7 x 14.7</u> (♀696?) ② <u>25.2 x 19.2</u> (both thrown out later by ♀695, see notes)	2 eggs (1 runt, 1 normal)
<u>30 May</u>	0700 Two eggs (see notes)	(♀695?) ① 25.0 x 19.2 (no air cell) (♀696?) ② 24.8 x 19.9 (off-center air cell)	
<u>31 May</u>	0700 4 eggs (see notes)	(♀695?) ③ 25.9 x 19.5 (no air cell) (♀696?) ④ 24.5 x 19.7 (off-center air cell)	
<u>1 June</u>	0650 5 eggs (see notes)	♀695 for sure! ⑤ 25.9 x 19.7 (no air cell) (also heavily marbled)	
<u>2 June</u>	0600 6 eggs (egg laid late 1 June!)	♀696 for sure! ⑥ 26.0 x 19.0 (off-center air cell)	
<u>4 June</u>	1545 (egg-laid 2 June most likely)	(♀695?) ⑦ 25.9 x ~~18.9~~ 18.9 (no air cell)	
<u>12 June</u>	1030	4 nestlings (from ① ② ③ + ④) 3 unhatched eggs (all pipping) (⑤ ⑥ + ⑦)	
<u>14 June</u>	1430	5 nestlings egg ⑦ unhatched (new nestling from either ⑥ or ⑤)	
<u>16 June</u>	1600	5 nestlings, egg ⑦ unhatched, with well-developed embryo from egg ⑤ or ⑥ hatched 12 June from eggs ① - ④	
		① Yel-Dorn ② Wht-Red ③ Red-L Blue ④ D Blue-Wht (N) ⑤ NB	
wt	24.5 21.0g 21.5g 17.0g 7.0g		(did not make it to 23 June)

Melanerpes formicivorusDark Hollow Nest Record (continued)23 June Checked hole, 1315

4 nestlings

→ 823

→ 824

→ 825

① Yel-DGrn

② Wht-Red

③ Red-LBlue

④ DBI-Wht(W)

53.5g

51.0g

51.5g

45.5g

2 July

Some nestlings still alive here in passing.

3 July

wt gone (!)

86.5g

87.0g

79.0g

1800

wing (fell out of nest?)

73 ~~mm~~

74

65

crown

1

2

3

3 Nestlings banded & bled as Juvs 823-825

Melanerpes formicivorusDark Hollow

12 June Checked nest, 1030: Hatching! Eggs ① ② ③ + ④ have hatched, and these 4 nestlings were marked with Sharpie (blue) on the right leg. Eggs ⑤, ⑥, + ⑦ Not yet hatched, but all were pipped slightly. No adult was in the hole when I arrived, and the eggs + young were a bit cool. I hope that's not a bad sign.

14 June 1430 5 nestlings! 4 from 12 June re-marked with Blue Sharpie on right leg. The fifth (quite small and probably won't make it) ~~was~~ marked on the left leg. The newcomer came either from egg ⑤ or ⑥, of which there was no trace. Egg ⑦ was still unhatched (and probably won't) even though it looked well-developed.

One interesting thing. After checking the hole I discovered about a 50 cm gopher snake on the main limb just above the nest branch. Holy cow! No funny bulges on it. I was afraid that my scent would lead the snake right to those juicy nestlings, so I heaved it away. It landed on the ground near the "other" of the two Sister trees, and disappeared into the grass.

16 June Hole check + pre-banding of the nestlings, 1600. Still 5 nestlings, the 4 from egg ①-④ quite healthy, but the 5th nestling looks to be on the way out. Only 7 grams. Egg ⑦ did not hatch, even though it contained a well-developed embryo.

Melanerpes formicivorusDark Hollow18 June ** GROUP UPDATE **

① ♀509 disappeared 24 April 1982 $\pm$ 2 weeks
 Last seen here for sure on 3 March, but probably
 here on 8 April. Not certainly gone until 13 May

② ♀695 + ♀696 moved here from 1800 12 May 1982
 (see 1800 notes)

23 June Checked the nest, 1315: 4 healthy nestlings, (from
 eggs ①-④), but the runt has disappeared. See
 Nest record.

3 July Banded the young here, 1800, and got a mild surprise.
 Only 3 nestlings! What's more, it was the largest
 of the ~~4~~ 4 from 23 June that disappeared. Very strange.
 However, I bet that the missing juvie fell out of the
 nest. It's a very shallow nest hole here, and the entrance
 points down, so that's not at all an unreasonable suggestion.
 Especially after what happened at Black Oak last year
 and Rd 1 + 1500 this year. ^{No trace of nestling below the} nest, however.

Anyway, the remaining three were banded Juvs. 823 -
825!

17 Aug A quick but successful watch here, 0800. ♂584,
 ♀695 ♀696 all seen quite well! Also J823
 Dbrn/wht-Dbrn and J824 ^{DBlue-Or/m} " " / DBlue. No
 sign of J825, and I saw only 5 birds total (for sure),
 so it seems likely that J825 is gone. Also got a
 hint that J824 is dominant over J823 (the latter
 gave ground as J824 hitched down a branch) but not sure.
 Birds were harvesting green-acorns from across "the ravine," ^{near} Blom 3

Melanerpes formicivorusDark Hollow3 Dec

Walked by here, 1030 - 1130, and get a full census:

♂584, ♀695, ♀696 all seen well, plus ♂823, ♂824, and ♀825: Two ♂ juvs, 1 ♀.

Dark Hollow is doing all right! A fair # of acorns stored, too.

Melanerpes formicivorusCorral Viejo

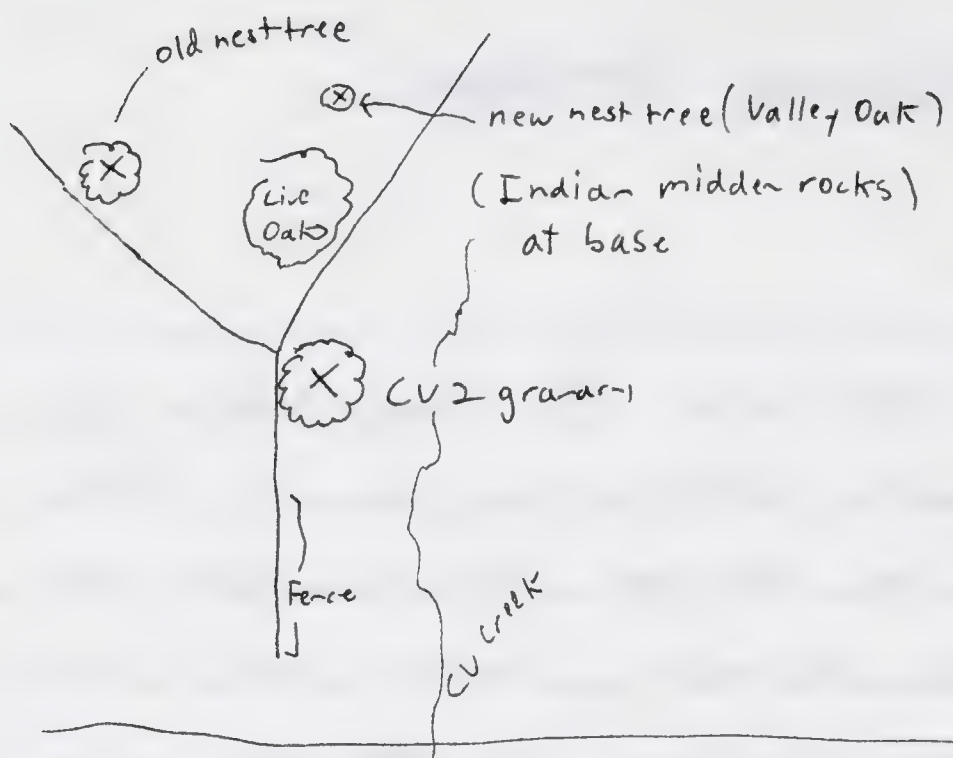
17 May I wander over here 1500 after Pam had told me of seeing a nestling looking out of a hole over at CV #2. Sure enough, I come to the spot Pam described and found about a 30 day old nestling looking out! Jeez, that means these guys must have started ~~lay~~ed to lay eggs on April 3 or so (± 4 days, I guess). Pretty impressive, I must say. The hole would require at least length of extension ladder (perhaps both), so I'm inclined not to try this nest, given that fact and the fact that the young might "fledge" the moment I put the ladder up.

At CV #1, things were better. Found a ♂ looking out of last year's nest hole (opened), flushed him, and heard nothing, making me think they are at egg stage. I will check them at a later date.

20 May Climbed up to the hole at CV 1, and to my surprise I found 2 fairly well along nestlings: Eyes open, feathers beginning to un-sheath, ~17 days or so?

24 May Banded the two CV #1 nestlings today, now J727 + J728. I did not take blood, because neither bird looked especially great. In particular, J728, the smaller of the two, was doing some strange panting or producing weird noises. These two were not as old as I thought they were now may be 18-19 days.

14 June Walkover to CV #2 at 1450, and sure enough, they have a second nest! It is in the upper (proximal) hole of two opened nest holes in their blue oak nest



Melanerpes formicivorusCorral Viejo

(14 June) tree (see map back of page 1). I flushed an adult from the hole, and heard begging noises that sounded like those of ~ 4 day old babies. I should check the nest here ~ 25 June. Also, there was a fledged juvie looking out of the hole below the nest, so some of the first nest nestlings are still alive.

At CV #1, no evidence of a 2nd nest. At Blom 3, I find a ~~juvie~~ fledgling looking out of the hole just below the nest hole, but no sign otherwise of a second nest.

25 June Banded 3 Nestlings, now J813, 814 & 815 at the CV #2 nest. They were still quite young (eyes barely open, ~ 60 grams, ~ 15 days old or so), but were healthy, and with the CV #2 granary well-stocked with acorns, they should all make it without trouble.

7 Oct Walking toward CV Grande from Gazebo, I find several CV Grande birds in the big old Valley Oak midway, along the road. Best sighting was ♂ 718 ^{M/LBlue} LBlue/Bk white, formerly of Blom 2. Certain now that CV Grande is his natal territory. Also two juvs. both apparently molting to ♀ plumage (♀812 ^{DBue/Bk-LPnt} and ♀809 M/Yellow-LBlue) and two adult ♀NB, as well.

8 Dec Greatambush ^{CV Grande} ~~ambush~~ Catching 7 birds all in the 1982 CV Grande nest hole: J♀808, J♀809, J♀812, ♂718, plus newly banded ♂836, ♂837, ♀838. Probably at least 1 ♀NB still in the group, however.

1982

R. L. Mumme

3

Melanerpes formicivorus

Corral Viejo Canyon

10 Dec

A successful ambush at CU#2 netting 5 birds:
♀ 815, Plus the newly banded ♀ 842, ♂ 843, ♂ 844
♂ 845.

Melanerpes formicivorusWestgate

- 8 Feb Counted stores, 1130: 580
- 4 March Alan + I watch here, and quickly get a complete census:
 1030 - 1100, ♂58 ^{LBorn/LBorn} no leg, ♀599 M/LBlue - Red, and
 ♂692, LBlue - DBlue / DBlue - LBlue. All doing well.
- 28 March Counted stores, 1300: 400
- 13 April A quick look with Leslie produces a complete census:
 ♂58, ♀599, ♂692 all seen well.
- 10 May At Leslie's recommendation, we drag the ladders out
 and check the '81 hole, 1830: 5 eggs. I had
 to peep in, since the hole seems to have been glued
 shut. The whole limb is so fragile, I only want
 to open it once, to band the babies. That is
 too bad, in a sense, because 1 or 2 of the eggs
 looked quite small (runts?), but I'm not sure.
 Anyway, from Leslie's description it sounds like
 incubation started on at least 8 May. I will
 guess hatching on 19 May, + banding on 10 June.
- 7 June Counted stores, 0930 - 70 Total
- 10 June I finally return to the nest here at 0800, only
 to find it has failed! No eggs, no nestlings,
 and a skull of a nestling (with a culmen 8.8 mm,
 meaning ~ age 6 days) ~~was~~ was all I could find.
 Also, there was a slight "stench of death" in
 the hole, and it was covered with those obnoxious
 ants that smell so strongly of formic acid. Anyway
 we know the eggs (or at least 1) hatched here, but that's
 about all. Could ants have caused failure? Will have to watch here.

1982 R.L. Mumme

Melanerpes formicivorus

Westgate Nest Record

- 10 May Peeped in 81 hole, 1830 5 eggs
- 10 June Checked nest, 0800: Failed No eggs or young
Skull of one nestling with 8.8 mm culmen
(~ 6 days old) ~~all~~ only remains.
Nest thus failed ~ 26 May
- 17 June 1600, checked hole after flushing bird from No eggs
hole
- 23 June 1430, checked hole Still No eggs.

Melanerpes formicivorusWestgate

(10 June) Another possible reason for nest failure is that the old legless ♂58 couldn't get into the hole one night and the nestlings all died of hypothermia. Or they all starved (but acorns are still present). Anyway, who knows. While we were checking the nest, there seemed to be a fair amount of action (wakes, 1 or 2 garricks, a few wicks, etc) that might have been related to a routine intruder but could suggest other stuff. We will have to watch soon.

17 June Today at ¹²⁰⁰~~1300~~ + again at ¹⁵³⁰~~1630~~ I found birds looking out of the same '81-'82 nest hole. Back with Alan + the usual ladder setup at 1630, I peep in but find the nest empty! Perhaps they are contemplating a second attempt, though.

19 June A bird looking out of the hole again at ~~1430~~ 1430

22 June Again I flush a bird out of the low hole here at 1730. There must certainly be eggs now!

23 June Nope! Checked the nest with Alan's help at 1430. Still no eggs! I wonder why these birds (or bird) are hanging out in the hole all the time.

18 Aug A quick little watch, 0800, produces all 3 residents. ♂58, ♀599, ♂692 all seen well. An intruder (sex unknown) was here briefly but was chased off by the males.

Counted stores: 0

4 Oct Quick watch, ♂58, ♀599, ♂692 all seen well, No sign of a fall nest. Saw ♂58 fly into the granary with a green agrifolia acorn, then eat it.

Melanerpes formicivorusGateHastings Reservation5 Jan

Bad news here. At about 1600 hrs (± 15 min), following several days of rainy, stormy weather, the major multi-hole granary branch came crashing down onto Martin Road. Joanne Daly alerted me, and I went down to survey the damage. A large section (about 8-10 feet) was still intact, and Joanne + I were able to prop it up against the sycamore in such a way that it should be usable to the birds. A few other odd branch fragments were also propped up in the tree. Scattered on the ground, however, were a large number of acorns (almost entirely agrifolia) which Joanne + I collected. I will provide an exact count of the acorns collected, holes destroyed, and acorns "returned" to the tree later.

6 Jan

Counted acorns still in the fallen limb. About 615 in the limbs, most probably still usable to the birds, now that I've propped them up.

In total, about ~~730~~ 650 acorns fell to the ground that were not collected. I still need to count those that Joanne + I collected.

20 Jan

Alan counted the acorns collected, and it was substantial

Live Oak: 690

Valley Oak 43

TOTAL 733

Meaning that the branch fall of 5 Jan cost these birds about 1380 acorns and (presumably) a comparable number of stores. 615 are still usable at the moment. 775 lost

Melanerpes formicivorusGate

24 Jan Finally, an OK watch here. ♀519, ♂626, ♂627, ♀685 all seen well. ♂686 is missing once again, and he may well be gone. Still no shortage of acorns in their remaining limbs.

8 Feb Counted stores, 1215

Fallen limbs 530

Still in tree 520

1050 TOTAL

2 March Alan + I struggle, but we managed to get the fallen limb returned to the granary tree, and in a fairly usable condition & position. It looks like a lot of acorns have already been removed from it since 8 Feb, but maybe 300 are still in it.

4 March watching here, 1045, Lo & behold we find the long lost (not seen since 7 Oct) J 686 ^{Wht/DGrn - BPrk(N)} M / BPrk - Black. What's more, "she" is in ♀ plumage! 1100, we have a complete census here! ♀519 ^{Blk - Yellow / Blk} ♂626 ^{Metal /} ♂627 ^{LBlue - Red / M} ♀685 and ♀686. Good!

28 March Counted stores, 1330: 620 Total

also saw ♂627 & ♀685 in the process.

24 Apr A quick look here, 1200, who should I find but ♀601 ^{LGrn / Yellow} M / Wht-LGrn, as suspected (see 1500 notes for previous 2 weeks!) 1207, she's in the top of the granary, preening. Not contested at the moment, though no other birds around. ♂627 was here a bit earlier. 1230, ♀519 ^{Blk - Yellow / M}, ♀601 together in a VO in between the swimming hole & CV road. No problems. ♀601 is back in the group. If ♂626 still here, no mate guarding yet.

Melanerpes formicivorusGate

12 April Drive past, 0900, and it looks like a power struggle is in progress: Fighting, chasing, etc. Back with Alan + scopes, 1000: Hmn! Right off I find a ♀ NB giving frequent garricks from a willow near the creek. Looks like ~~there~~ at least ² other intruders, too. However, all the breeders are here: ♀519 + ♂627 are conspicuous, and ♂626 is here but keeping a low profile (not seen by me, but by Alan) Also ♀601 + ♀685 are here, but ♀686 is missing, and I would guess gone for good.

I would guess that this is just an attempted takeover power struggle. By 1030, things calming down, the residents look in full control of the granary. Nonetheless, it is good to know that often birds try to takeover a territory.

13 April Leslie + I look in here, 1600. All quiet now, so it was definitely a short-lived power struggle. However, as we walk up, one ♀ is looking into the 1981 nest, and another ♀ is in the hole looking out.

20 April Watching from the bridge, 1010: A ♀ is in the '81 hole, looking out, as I arrive. It's ♀519, and she is followed out at 1020 by a ♂, with another ♂ nearby. Mate guarding has begun! See details on back: Also, Over on Square nail flat I find 3 birds (♀519, 2 ♂♂) in the Broken Live Oak, and I also find a new hole in that live oak, near where the core 3 was hanging out. ♀601 here for a while. ♂626, ♂627, ♀519 here + "tight" End 1140

Back at it 1440: A bit more data, but it's tough here PM

20 April 1982

Gate prenesting

1025 core 3 ♀601 g |
30 " " " " |
35 core 3 g |
40 " " |
45 " " |
50 " " |
55 core 3 SNF |
1100 " " |
05 ?
10 ?
15 core 3 mailboxes |
20 core 3 g
25 " " "
30 " " "
35 " " "
1140 end

both ♂♂ FTF 601 1

both ♂♂ F 9519 III JII

♂626 MAF ♀519 11

both ♂♂ MAF 9685 11

1445 ?

50 all 5 g

55 ♀685 g

1500 core 3 ♀685 g |

05 all 5 g |

10 core 3 ♀685 g

15 " " " |

20 " " " |

25 ♀685 SH (swimming hole area)

30 ♂627 ♀519 ♀685 g | ♂626 corral field

35 ?

40 ♀685 g |

45 ♀685 g |

50 "

55 ♀685 SH |

Melanerpes formicivorusGute

- 22 April Another try here, 1630: Pretty good: Good ♀-following ♀519 also ~~was~~ was in the 1981 nest hole for a while, too.
- 23 April watching 1105. 1240, Not very good. I always managed to be looking elsewhere when the birds flew in & out of the granary. However, 1220-1235 the core 3 were all inside the 81 nest hole again.
- 25 April Checked the 81 hole here. No eggs yet, but the hole had been substantially ~~deepened~~ deepened, and I was somehow inspired to open it up for a new cut.
- 27 April Watching 0740. Prenesting behavior on back. Guarding still going on in earnest, but ♀519 may be laying already. She entered the 81 nest hole at 0745 (0645) and didn't leave until 0807. Both ♂♂ followed her in, and she was down in the hole. At 0804 ♂656 Red-wh/DBk ^{top of the} of Road 3 came into the granary, while all the core birds were down in the hole. After the core 3 left ~3 min later, ♂627 chased him out. End 0900.
- 29 April Checked the hole, 1630: 3 eggs, marked! Birds appear to be incubating, though the clutch is fresh.
- 3 May checked the hole, 1030. 4 eggs, the 4th marked, all measured (see nest record). This would mean clutch complete 30 April. Expect hatching about 11 May, and banding about 1 June.
- 16 May Checked hole, 4 nice-looking nestlings! See nest record.
- 18 May Roosting watch. Pretty sure ♂626 ^M came to the hole late, entered, and then a round-headed (♀?) bird left, meaning ♂626 roosted in the nest.
- May ♂626 roosted again!

22 April 1982 Gate prenesting

1635 ♀685 g
40 ♀685 g |
45 ♀685 g |
50 ♀685 ♀601 ♂537 (Rd 3) g |
55 " " " " " |
1700 " " " " " |
05 all 5 g |
10 core 3 ♀685 g | ♀601 SH |
15 " " " " " |
20 all 5 g |
25 core 3 ♀685 g |
30 core 3 g |
35 " " " ♀685 g |
40 core 3 CF | ♀685 g |
45 ♀685 g |

both ♂♂ follow ♀519,

both ♂♂ FTF 601 11

♂627 MAF ♀519 11
♀685 ,

both ♂♂ MAF ♀685 1

23 April 1982

1105 nobody

10 "

15 "

20

25

30 core 3 g |

35 core 3 g |

40 ?

45 ?

50 ?

55 core 3 g |

↓ ?

1220 core 3 NH ♀685 g |

25 "

30 "

35 "

♂627 MAF ♀519 1

both ♂♂ follow ♀519 1111

FTF ♀601 1

♂627 MAF ♀519 1

♂626 MAF ♀519 1

♀601 1

27 April 1982

0745 core 3 g |

0750 core 3 nest hole |

0755 " " " |

0800 " " " |

05 " " " |

10 core 3

15 core 3 ♀601 g |

20 core 3 g |

25 core 3 g |

30 nobody

35 core 3 g |

40 ~~core 3 g~~ core 3 g |

45 nobody

0850 nobody

55 "

0900 "

Melanerpes formicivorusGate Nest Record

25 April Opened the 1981 hole, 1300: No eggs

29 April Opened the hole, 1630 3 eggs

Eggs marked 1-3: Adults incubating

3 May Opened hole, 1030 4 eggs

① 25.3 x 18.1

② 25.7 x 18.8

③ 26.0 x 18.9

④ 25.2 x 19.1

Laid on or before
29 April

laid after 29 April

16 May Checked hole, 1800

4 healthy nestlings

(→788)

(→789)

(→790)

(→791)

①

②

③

④

BK-LBlue

LBlue-DBlue

LBlue-Red

VB

26.0 g

25.0 g

24.5 g

18.0 g

1 June wt 71.0 g

79.0 g

78.0 g

67.0 g

1500 wing 80

80

74

59

crown 1

2

3

4

Banded and bled all 4 nestlings,
now juvs. 788 - 799.

Melanerpes formicivorusGate

20 May Roosting again, and again at 0730 a bird that I was fairly sure had a metal band on the right leg roosted, meaning ♂626 roosted.

21 May Roosting: This time I watched from the other side of the hole, and I'm fairly sure that I was able to make out Light/Dark/Metal on the left, meaning ♂627 roosted!

7 June Counted stores, 0945: 70 TOTAL

18 June Group update **

- ① ♀686 disappeared 22 March $\pm$ 2 weeks
Last seen on 4 March, certainly gone by 12 April
 - ② ♀601 returned to Gate 24 March 1982 $\pm$ 1 week
 - ③ ♀601 moved back to 1500 8 May 1982 $\pm$ 1 week
- (see 1500 notes for details)

23 June Watching for juvenile dominance here, 0915.
0930, dominance! J791 Dorn-or in the top of the granary, ^{was} pecked hard on the head several times by a Juvenile that I believe was J789 M/
(The juvenile dominant was definitely not J788 wht-LBlue/BK-LBlue m / wht-LBlue, who was in view elsewhere.
♀519, ♀685 also seen, ♂627 too.

1055 More dominance! 790 Red/m and 789 together w/adult on top of granary, 790 pecks hard at 789, 789 hitches under branch for ~~10~~ 30 sec. Then 789 moves to top of branch, and 790 pecks at 789 again. Very good! Not a bad start, but still a lot to be done. End 1105.

789 (?) > 791 1

790 > 789 11

Melanerpes formicivorusGate

24 June Trying here again 0945: Good! 1030, One of the acornless storage limbs, J789 + J788 together without adult, 789 Grn-Blk/yellow pecked hard at the head of 788 ^{Grn/M} M/wht-L Blue! Also, 1115. J791 and 788 at the top of the granary, 791 hitches down the limb and really wallops the head of 788! A pause of ~30 sec, then 791 hits 788 hard again.

Very good. Also, a complete census.

25 June Excellent Juv. watch here, 0700-0900, including 6 independent cases of J790 pecking J788, (hard), 1 more case of 790 pecking hard at 789, and 1 case of 789 pecking at 788. See reverse

28 June Watching here, 1550: Nothing at all. End 1745.

1 July Once more, 0900: Misty, foggy, cool morning. 1022, Just as I'm about to give up, success! J790, J791, ♂627 together on one of the vertical storage limbs. J790 ^{Red/M} above (with 627), J791 ^{Grn/M} below. Four separate times J790 came down the limb and pecked hard at the head of J791. Great! That was the last dominance interaction I needed to see. End 1030.

18 Aug Counted stores, 0845: 0 TOTAL.

Also saw ♀519, ♂627, ♀685, J788 in passing.

4 Oct After a slow start, a good watch here: ♂626, ♂627, ♀519 ♀685, and all 4 juvies seen upon the side of School Hill. 1415-1700. Juvies 788, 789 + 791 seem to be in molting to ♀ plumage, while J790 is a sure ♂.

790 > 789 > 791 7 788

from 23 June 789 > 791 I
 790 > 789 II

24 June 789 > 788 I
 791 > 788 II

25 June 790 > 788 IIII I
 789 > 788 I
 790 > 789 I

1 July 790 > 791 IIII

dom	Sub		
	789	791	788
790	III	IIII	IIII I
789	—	I	II
791		—	II
788			—

Melanerpes formicivorusWarp 5

4 March Walked up here with Alan to setup the blind to let Alan watch here at a later date. Birds are doing OK, acorn wise.

28 April 1300, I find nobody looking out of either of the two holes that I know about here. I flush 2 birds from the Valley Oak granary-nest tree as I walk up. Still plenty of acorns stored here (well, a fair number anyway).

16 May ~~0800~~ 0900-1000 I wander all around here, check the holes for birds looking out, watch the birds, and find no nest. Seems like they should have one, even though only about 50 acorns remain in the storage limbs.

18 May Trying the same thing here, from PO hill, 0800-0930. Nothing! I'm starting to think Warp 5 just does not have a nest. I didn't see any birds carrying food anywhere, or flying to any holes that I knew about. However, it seemed like there was a fair amount of internal conflict in the group, one member occasionally being chased. I saw 5 birds together at one time, so perhaps there is a new ♀ that has displeased the 2 helper ♀♀? I will have to take a blind up and watch from above the granary to figure it out!

27 May Another look at the holes, 1145, Still nobody. I'll have to let Alan try to watch here

17 June Watching from the blind up here, 0915. Alan has watched here recently and has reported the absence of ♀629, leading me to think that with 3 ♀ helpers here (Alan has seen 702, 703, + 704), Warp 5 may be suffering from "Finch Syndrome"



Melanerpes formicivorusWarp 5

(17 June) 1115, looks like ♀629 is gone. Saw ♂528 m /
 ♀703 Yellow/mauve ♀704 L Pink-Obn / m for
 m / mauve, sure, and possibly ♂636 Lbrn / m, but I wasn't
 sure. Saw nobody carry food anywhere. Most
 of the time I could see the birds hanging out
 on the Valhalla - Warp 5 ridge (above the Black Oak
 nest tree).

4 Oct

On the side of School Hill above the gate I find two
 Warp 5 birds: ♀703 Yel/mauve and ♀704 L Pink-Obn / m
 chasing + being chased by Gate birds in the same area.
 Also saw a ♀NB in the area briefly! Was she a straggler,
 or perhaps a new ♀ at Warp 5?

Melanerpes formicivorusPipeline

27 Oct Hallelujah!! At long last, PIPELINE IS OCCUPIED!

Passing by at 1100, I find 3 birds in the granary. One is good old ♂660 ^{DBue-wht (CV)/m} DBue / wht, formerly of Plaque! A good 1 mile dispersal for a ♂, yet, may be close to a record. One of the two others was, as expected, ♀704 ^{LPht-DBrn / m}

I suspect the third bird was ♀703. These two warp 5 ♀♀ had been seen here, off + on, for some weeks now.

The clincher today is that there are stored acorns here (~20). Also heard the 3 birds waka to each other.

1130, confirm ♀703 ^{Yellow / mauve}. Saw ♀704 store an acorn, and she and ♂660 pecked into the roost hole in the granary. Great!! Its official!

1140, Also, in the top, dead stub of a sycamore, 20 m N of the granary along the creek, is a ^{fresh} hole that appears to be under construction. A bit earlier I saw ♂660 fly to the

granary from that direction with a mouth full of sawdust.

Hole is certainly accessible by extensio-ladder, possibly by freeclimbing.

1982 R. L. Mumme

Melanerpes formicivorus

Road 1

Hastings Reservation

12 Jan * GROUP UPDATE *

① J673 disappeared 1 Sept $\pm$ 1 month

Last seen 5 Aug 1981. Missing 16 Sept, 1 Oct, and certainly gone by 6 + 16 Oct 1981.

19 Jan 1050, showing Alan around, a quick look here. ♂486, ♀383, ♀269, ♂577 all seen very well. It looks like a bit of storing action may be going on here, still. End 1115.

23 Jan Granary census, 1040-1240, on back Good census!
♂486, ♀269, ♀383, ♂294, ♀578, ♂579, ♂580 all seen well.
Only ♂577, who was here 19 Jan, and ♂672, who may well be kaput, not seen. Some storing, still: 4 acorns stored in the 2 hours.

7 Feb Sample of ~ 35 acorns taken from the 1^o granary and replaced with a roughly equivalent # of my own.

8 Feb Counted stores, 1300:

Valley Oak 2000

Sycamore 1120

3120 TOTAL.

19 Feb Granary census 0855-1055. A very good watch here.
The big surprise proved to be seeing ♂672 ^{LB Blue / DB Blue-Y (N)} ^{DB Blue-Yell (N) M} who had-'t been around (not seen since late October, as a matter of fact). Only ♀578 missed: ♂486, ♂294, ♀269, ♀383, ♂♂577, 579, 580, 672 all seen well. No storing, but a good bit of granary defense.

21 Feb Another granary census, 1400-1600. Very slow. Warm + sunny at first, but overcast w/cool wind from 1520 on. Core 4, ♂♂579+580
singing ♀♀ → on back only birds around. Whoops, ♀578, ♂577 late.

23 Jan 1982 Rd 1 granary census 1040-1240

1040 nobody
 1045 "
 1050 ♂294 ♀269 1°
 55 ♀383 2° WS
 1100 nobody
 05 "
 10 "
 15 "
 20 ♂486 ♀269 1°
 25 ♀269 (1°)
 30 nobody
 35 "
 40 ♂580 ♀269 1° WS
 1145 ♀269 1° WS
 50 ♀269 1° WS
 55 ♀269 1° WS
 1200 ♀269 1°
 05 nobody
 10 "
 15 ♀269 1°
 20 nobody
 25 nobody
 30 ♀383 1° / ♀269 2° WS
 35 ♀269 ♀383 2° g / WS
 40 ♀269 2°

Storage

♂580 11 (2)
 ♀269 11 (2)
 ♀383 1 (1)

5 2.5/hr

defense

1230 ♀269 Redtail 1

19 Feb 1982 Rd 1 granary census 0855-1055

0855 ♀269 ♂672 1°
 0900 ♀269 383 ♂577, 579, 580 1° / ♂486 2°
 05 ♂580 EA 1° / ~~W~~ ♂579 2°
 10 nobody
 15 ♀383 1° EA
 20 ~~W~~ ♀383 1°
 25 ♀383 2°
 30 ♀383 ♀269 2°
 35 ♀269 1° / ♂580 / ♂672 WS 2°
 40 ♀383 1° EA / ♂672, ♂580 WS / ♂579 2°
 45 nobody
 50 ♂672 EA, ♀383 1°
 55 ♂577 1°
 1000 ♀383 ♂486 1°
 05 ♀383 WS, ♀269 EA 1° / ♂486 2°
 10 ♀383 WS, ♀269 1° / ♂486 2°
 15 nobody 1° / ♀269, ♂486 2°
 20 nobody
 25 ♂577, ♂580 EA 1° / ♂579 MA 2° ♀269 2°

No
 storing

defense

0855 ♀269 Titmouse 1

0940 ♂579 ~~W~~ Jay 1
 Scm

0949 ♀269 AW? 3

1000 ♂486 Titmouse 1

1030 ♀269 1° / ♂579 580 (2)
 35 ♀383 1° / ♂580 2°
 40 ♀383 ♀269 1° / ♂580 2°
 45 ♀383 1° WS
 50 ♂577 1° / ♀269 ♂486 2°
 55 ♀269 2° / nobody 1°

21 Feb 1982 Road 1 1400-1600

Storage

1400 nobody
 05 "
 10 ♀269 2°
 15 ♀269 2°
 20 ♀269 WH 2°
 25 ♀269 WH 2°
 30 ♀269 WH 2°
 35 ♀269 ♀383 ♂579 2° ~~W~~ ^{all WH}
 40 ♀269 WS 2°
 45 ♀269 WS 2°
 50 nobody
 55 nobody
 1500 ♀269 WS 2°
 05 ♀269 2°
 10 ♀269 2°
 15 ♀269 2°
 20 nobody
 25 ♀383 2° MA
 30 nobody
 35 ♀383 2°
 15 40 nobody
 45 ~~W~~ ♀383, ♀578 WS 2°
 50 ♀383 ♂577 WS 2°
 55 ♂577 WH 2°, ♂580 2°
 1600 nobody

♀383 | 1

1540 ♀383 chatters to
 ♀269 on 2° granary!

Melanerpes formicivorusRoad 1

22 Feb Slow granary watch here, 1055-1255. A few acorns stored, a bit of defense. Only ♀♀ 269, 383, ♂♂ 486, 577, 580, 672 seen.

24 Feb Moderately slow census here, but I did pull out a complete census. All the above birds, plus ♂ 294, ♂ 579, ♀ 578. Nothing really noteworthy, although ♀ 383 had me worried for a while: I didn't see her until late, unusual for her.

25 Feb Another granary watch, the final of the 6 planned. ♀ 269 was nearly always around today, but the other group members weren't particularly active. I'm still wondering if my presence disturbs some of these ~~per~~ birds, especially ♂ 294. But it's too late now. I certainly don't seem to bother ♀ 269 et al. I missed ♀ 578, but otherwise a complete census.

<u>28 March</u>	Counted stores, 1415:	Main granary (VO)	<u>1300</u>
		2° granary (sycamore)	<u>1190</u>
		TOTAL	<u>2490</u>

Also, when I walked up a bird (♂ I believe) was looking out of the hole (in the Black Oak) just below last year's nest hole. Obviously it is in pretty good shape. I will have to check it out (+ open it) soon. While counting the 2° granary, I see ♀ 383, ♀ 269, ♀ 578, ♂ 579, ♂ 577, ♂ 580. Didn't see that ♂ 486 was not on ♀ 269's tail yet, but I should watch here soon.

30 March Watching from PO Hill, 1020: 1130, Pretty slow. Trying to see if ♂ 486 is guarding ♀ 269 yet, but I wasn't able to convince myself

22 Feb 1982 Road 1 granary census 1055 - 1255

1055 nobody
1100 ♀269 WS 2°
05 nobody
10 ♀383 SA 1°
15 ♀383 2°
20 nobody
25 "
30 ♀269 2° MA
35 ♀269 1° MA | ♂486 ♂580 2°
40 ♀383 WH, ♂577 MA 2°
45 ♀383 WH, ♂577 2°
50 nobody
55 "
1200 nobody
05 "
10 ♂580 WS 2°
15 ♀269 1°
20 nobody
25 ♂577 WS 2°
30 nobody
35 nobody
40 "
45 "
50 ♀269 2°
55 nobody

defense
1110 ♀383 scrub Jay 1
1135 ♀269 AW? 3
1213 ♀269 scrub Jay 2L

1st hr 2nd

Storage
♀383: 1
♂577: 1
♂580: 1
♂672: 1

24 Feb 1982 Road 1 1425 - 1625

1425 ♀578 2° WS
30 ♀269 2°
35 nobody
40 "
45 ♀269 WS ♂486 2°
50 ♀269 EA 2°
55 nobody
1500 "
05 ♂486 2° MA SA
10 ♀269 ♂579 ♂672 WS 2°
15 ♀269 ♂580 WH 2° WH
20 ♀269 2° WS
25 nobody
30 "
1535 nobody
40 "
45 "
50 "
55 ♂580 WS ♀269 WS 2°
1600 ♂580 ♂486 WH, ♀269 MA 2°
05 ♀383 ~~SA~~ ♀269 MA 2°
10 ♀269 ♂580 1°
15 ♀269 1°
20 nobody
25 "

Storage
♂577: 1
♂486: 1
♂579: 1
♂672: 1
♀383: 1
♂294: 1

defense
1610 ♀269 BT Pigeon 1

25 Feb 1982 Road 1 0820 - 1020

0820 nobody
25 "
30 ♀269 MA 1° | ♀383 2°
35 ♀269 1°
40 ♀269 1°
45 ♀269 1°
50 ♀269 1° | ♀383 WS 2°
55 ♀269 1° | ♀383 2°
0900 ♀269 WS 1° |
05 ♀269 WS 1° |
10 nobody
15 ♀269 ♀383 1° | ♂486 2°
20 ♀269 ♂672 1° | ♂577 2°
0925 ♀269 ♀383 WS | ♂672 1°
30 ♀269 ♂672 | ♀383 WS 1°
35 ♀269 1° | ♂580 WS 2°
40 ♀269 1°
45 ♀269 1°
50 ♀269 1° MA
55 ♂579 1° WS
1000 ♂579 1°
05 ♀269 WS ♀383 2°
10 ♀269 2°
15 ♀269 WS 1°
20 ♀269 MA 2°

defense
0832 ♀269 Titmouse 2
0836 ♀269 " 1
0846 ♀269 " 1
0915 ? AW? 2
0920 ♀269 Titmouse 1
1002 ? AW? 3

Storage
♀269: 1

Melanerpes formicivorusRoad 1

(30 March) either way, although it didn't appear so: ♂486, ♀383, ♀269, ♂577, ♀578 all seen. Also saw a bird briefly enter the 1981 nest hole, not the new one underneath it. Will have to get both of them ready.

1 April Halfway opened up the new Black Oak hole, but it began to rain like hell before I could finish. Patched up the saw marks with DAP.

2 April Watching from PO Hill, 0815. Still doesn't seem like anything serious here yet, but I am getting a suggestion that ♂486 is starting (although not fully) to guard ♀269. Will have to watch from a blind here, above the granary. Only once did a bird visit a hole. I think it was ♂486, who looked into the 1981 hole, not the new hole.

4 April Watching 0815, from blind above granary. It looks like ♀-guarding has begun! I saw 4 nice cases of ♂486 following ♀269. No action at the holes, but that may have been because a imm Red-tailed Hawk sat in the Black Oak from 0830-0920. Also, a bit more

Dom → dominance: In the 1st granary, ♀383 chattered to ♀269 again! Also, I saw ♂580 chatter to ♂577.

5 April Watching from PO Hill, 0900. 1000, Mate guarding is definitely on! ♂486 followed ♀269 at least 10 times, and never failed to follow. Also, about 6 points the two were within 15 m, never far apart. However, No real interest in any holes! ♂486 peeked into the new hole once, but that was all. Birds were hanging out a lot in the clearing 50 m W of the granary. Will check there for holes. 1020, in a dead Black Oak there is one shitty hole, but nothing promising.

Melanerpes formicivorusRoad 1

6 April 1120, Trying again from PO Hill. 1220, I'm becoming convinced that these guys aren't going to lay in the next few days, at least. ♂486 is following ♀269 everywhere, as usual, but they never seem to go into any holes. Although ♂486 pecked into the "new" hole. The rest of the time the couple spent either in the granary or in several different trees above the granary, near Valhalla.

11 April Watching from PO Hill 1000: As soon as I sit down, I see a fairly regular stream of birds entering or looking into the 1981 nesthole (not the new hole) in the Black Oak. ♀269 (escorted by ♂486) entered at least once, as did ♀383. ♂580, ♀578 + perhaps others also "visited" (looked in). Looks like that could be the choice of holes.

12 April Alan watched here today and saw a couple of birds look at the 81 hole, but nobody ^{went} ~~looked~~ in. Nonetheless, at 1445 I climb up to the hole, change the nails, re-open, ~~re-dap~~, etc.

13 April Watching holes from blind, 0620. A bit of guarding data also recorded (see back). No interest in the holes, other than ♂486 + ♀383 looking in briefly each at 0745. End watch at 0800.

16 April Watching from the open spot, 1610, looking to see how hard ~~granary~~ ♀-guarding data will be to come by. Not too bad, is my guess. A bit of data on back. See reverse. Complete census except ♂294.

20 April 0610, watching nesthole from blind. 0745, Nothing. 0845, Now I'm upon PO Hill, trying to see if

Road 1 Prenesting 13 April 1982 0630 - 0800

0630 ♂486 ♀269 ♂577 1° |
 35 ♀383 ♂? 1°
 40 ♀383 1° |
 45 ♀383 1° |
 50 ♀269 ♂486 1°
 :
 0705 ♀269 ♀383 ♂486 1°
 10 ♂486 ♀269 ♀383 1° |
 :
 30 ♀269 ♂486 1°
 50 ♀269 ♂486 1°
 0800 End watch

♂486 follows ♀269 1

♂486 FTF ♀383 1

16 April 1982

1610 - 1640

1610 ♂579 1° |
 1615 ♂486 ♀269 ♂672 1° | ♂579 2°
 1620 ♀269 ♂486 ♂577 ♂? 1° | ~~♂579 2°~~
 ♂? ♂672 2° |
 1625 ♂486 ♀269 ♂580 ~~♂577~~ ♂577 ♂672 1° |
 ♀383 2° }
 1630 ♀269 ♂486 Creek | ♀383 2° | ♂672 ♂577 1° |
 1635 ♂577 2° |
 1640 nobody

♂579 MAF ♀269 1
 ♂486 FTF ♀383 1
 ♂577 FTF ♀383 1
 ♂579 F ♀383 1
 ♂580 MAF ♀269 1
 ♂672 FTF ♀269 1
 ♂577 FTF ♀269 1
 ♂486 F ♀269 1
 ♂577 MAF ♀578 1

Melanerpes formicivorusRoad 1

(20 April) these birds are interested in any other holes.

0945. Doesn't seem like it. ♀269 took a peek at the new hole briefly, and ♀383 entered the 81 hole for about 15 sec, but that was it. Looks like birds may be sapsucking already from the Live Oaks below the granary. ♂486 still definitely following ♀269.

22 April Watching from PO Hill, 1100. 1200, Nobody has so much as looked at a hole, but ♂486 is still definitely following ♀269 around (at least 4 good follows) Lots of Flycatching in the granary, but the birds gave no impression of being interested in a hole elsewhere.

25 April 0610, watching holes from blind. Yesterday from PO Hill I watched 0930-1100, and saw a starling invasion: One was persistently in or hanging around the 1981 nest hole, and although the woodpeckers were scolding him vigorously, they didn't seem to be having a great deal of success chasing him out. At least the AW were still interested in the hole.

1000, well, we live + learn. Watching today I became convinced that ♂486 was no longer following ♀269. Sure enough, I look around + eventually flush a bird out of the lowest hole in the 2^o granary, the only hole invisible from both Poison Oak Hill and the usual spot above the granary. I climb up (pretty easy) and find 6 EGGS! Shit! we blew it. I open the hole, but eggs neither marked nor measured. Maybe I'll take the clutch and let them do it Over.

Melanerpes formicivorusRoad 1

26 April Peeped in, 1600: 8 eggs, so both ♀♀ are definitely laying. I have decided to take the clutch when it's complete, and let these birds nest again.

28 April As promised, 1400 I remove all 8 eggs from the nest. See nest record for details.

1 May 0800 - 0900, First watch here after clutch removal, from PO Hill. Several interesting developments:

① ♂486 appears to be following ♀269 again. It's a good sign! It could mean re-nesting fairly soon.

② Birds shopping around for various holes. The leading candidate appears to be the new black oak hole just below the 1981 nest hole. ♀269 went into that hole for ~5 min, with ♂486 looking in most of that time. ♂486 also entered after she left, which may mean that he's not totally serious about following her yet. Also, I saw who I thought was ♀383 enter the '81 hole briefly and fly out with ^{what looked like} a piece of Starling wing (!) ! Could they have killed the Starling in the hole? Will check it tomorrow. ♂486 also went into the '81 hole for a few seconds, but left with nothing. Also, ♀269 made a brief entrance into the middle of the 3 holes in the dead stub of the Valley Oak above the Black Oak. Will keep an eye on it. Tomorrow I'll watch from the blind and from the road (to keep an eye on the 2° holes).

→ ③ Also, note that ♀578 has won a power struggle at Blom 2, and has apparently moved there. ^{See Alan's notes!}



1982 R.L. Mummie

Melanerpes formicivorus

Road 1 Nest Record

25 April Found surprise nest in Sycamore (not marked or measured)
2° granary: Opened 1000 6 eggs

26 April Peeped in, 1600 8 eggs

28 April Climbed up to the hole, REMOVED ALL 8 eggs, 1400

We are going to make this group re-nest!

Eggs measured:

25.6 x 20.4	25.0 x 21.0
25.9 x 20.3	25.4 x 21.1
26.2 x 20.3	25.2 x 21.3
25.8 x 20.0	
24.4 x 19.5	

♀269? →

♀383? ↑

(Looks like a 5-3 skew again)

7 May New nest in 1981 hole (later tossed by ♀383)
0720, 1 egg ① 24.5 x 18.5 (♀269?)

8 May Two new eggs, 0745 ① 28.2 x 20.0 (♀269?)
(both thrown out: see notes) ② 22.3 x 18.0 (♀383?)

9 May Two new eggs, 0745 ① 25.4 x 20.8 (♀383?) 22 May hatched
② 26.0 x 20.4 (♀269?) hatched 22 May

10 May Checked hole, 1245 ③ 27.1 x 20.3 (♀269?) 22 May hatched
2 new eggs ④ 25.4 x 21.4 (♀383?) 22 May hatched

11 May Checked hole, 1315 ⑤ 26.5 x 19.8 (♀269?) 23 May did not hatch
2 new eggs, 6 total ⑥ 25.7 x 21.2 (♀383?) did not hatch

12 May 1745, 7 eggs total ⑦ 25.6 x 21.0 (♀383?) hatch

13 May 1400, Still 7 eggs

22 May 1630: 3 eggs (⑤+⑥+⑦) + 4 nestlings (from eggs ①-④)

23 May 1600 2 eggs (⑥+⑦) + 5 nestlings (from eggs ①-⑤)



1982 R.C. Mumme

Melanerpes formicivorus

Road 1 Nest Record (cont)

27 May

1100, Nest check
from eggs

5 babies, 2 un-hatched eggs

804
① Bk Red

Dbrn 805
② LPink-~~BK~~

806
③ Dbrn

807
④ Red-whit

from egg ⑤
⑤ NB

25.0g

25.8g

24.5g

19.0g

17.5g

13 June

83.0g

88.0g

83.0g

76.0g

gone

1330 wing

81

84

90

79

crown
seq

2

3

1

4

Melanerpes formicivorusRoad 1

4 May Watching from PO Hill 0630. Yesterday I watched from the blind and saw ♀383 remove woodchips from the new Black-oak hole. Today, ♀383 does it again, and ♀269 looks into the '81 hole, but that's all.

6 May Watching from PO Hill while Alan watches from hide. Looks like it should be soon. ♀269 spent 20 min in the 1981 nest hole, 0600-0620, and ♀383 spent about 10 min, 0700-0710. I checked the hole at 0810, no eggs. But it should be soon.

7 May It is soon. 1 egg laid today. Things are a bit confusing as ♀383 was in the '81 hole between about 0547 and 0605, and ♀269 was in between about 0640 and 0705. Checked the hole 0720 found 1 egg, 24.5 x 18.5. I strongly suspect ♀269, because ① ♀383's visit to the hole was a bit early for egg laying, while ♀269's was right on schedule ② Egg size definitely suggests ♀269: long + oval, not nearly circular like ♀383's usual eggs. Also, if ♀383 laid first, I would have suspected ♀269 to have thrown out the egg. She was also in the hole for a few minutes at 0712, but did not leave the egg. Alan is watching the hole right now to see what ♀383 does, so stay tuned. End 0750. See Alan's notes for details on egg-laying times.

Yeah!



1000 Good news! ♀383 carried the egg out about 0918, carried to the 1^og, then the 2^og, where it was eaten by ♀383, ♀269, and ♂672! See Alan's notes for details.

Melanerpes formicivorusRoad 1

8 May Checked hole 0745. See Alai's notes for details of nest visitation. Anyway, two eggs!

① 28.2 x 20.0 (♀269?) ② 22.3 x 18.0 (♀383)

Egg ②, almost certainly ♀383's (quite round) is a near runt, so I'm having Alan watch the hole a bit longer to make sure ♀383 doesn't heave them both out. Probably what happened today is ♀383 laid first, then ♀269, but ♀269 did go in the hole early, too. Can't be sure, but Alai's notes will provide the details.

1020, well, bad (sort of) developments. Alan reports ♀383 removed one of the two eggs about 0900, ~~but~~ (it was carried to the log and apparently eaten, especially by ♂672), but then Alan stopped watching the hole. When I checked the nest at 0910, the nest was empty, so both eggs were removed. This creates a quandary:

① Alan thinks that the egg he saw removed was long and noncircular, meaning it was probably ♀269's egg he saw removed.

② I would feel fairly comfortable in assuming that ♀383 removed both eggs. But on the other hand, who knows?

How to deal with this in analyzing the data? Either assume both were removed by ♀383 (her own ~~near~~ near runt), or ♀383 removed ♀269's, and the near-runt unknown or both unknown. What to do?

Melanerpes formicivorusRoad 1

- 9 May Checked hole, 0745, after Alan had been watching here. See his notes for details. Anyway, 2 new eggs, marked + measured. Hopefully it is indeed over here.
- 10 May 2 more eggs: See nest record.
- 11 May " " " " " "
- 12 May Only one egg today, pretty clearly the work of ♀383 (quite wide, very round egg). This may be it, making it 4-3 in favor of the tosser, ♀383.
- 13 May Nestcheck, 1400, still 7 eggs. So clutch was complete as of 12 May, meaning 23 May is good day to anticipate hatching, and banding about 13-14 June.
- 22 May Checked the nest 1630: Hatching: 4 small nestlings, from eggs ① ② ③, + ④, all marked with blue sharpie on the right leg. Eggs ⑤ ⑥ + ⑦ not yet hatched, but all 3 have a chance.
- 23 May Nestcheck, 1600. One more egg (⑤) has hatched, and it was marked with blue sharpie on the left leg. Egg ⑦ looks like it probably won't hatch, and I have doubts about ⑥ now, too.
- 27 May Checked the nest, 1100: 5 nestlings, plus eggs ⑥ + ⑦, unhatched. The sharpie marks of 23 May were still visible, so I know for certain that one young came from egg ⑤. However, this means that the skew in nestlings is 3-2 in favor of ♀269, the dom ♀, but the victim of the egg destruction.

Melanerpes formicivorusRoad 1

6 June Watched roosting here, and saw definite M/ on the left leg as the bird went into the nest hole, meaning ♂486 roosted

7 June Counted stores, 0830

Valley Oak (1°g)	510
Sycamore (2°g)	5
TOTAL	<u>515</u>

8 June Roosting again. A ♂ was in the hole looking out when I arrived, but the head shape + pattern indicated ♂486 roosted

13 June Banded 4 Nestlings, 1330: The "runt" from egg (5) had disappeared (2° feathers, sheathed, found under hole, so his death/ejection/whatever probably occurred recently. Anyway, this means that the skew in nestlings banded is zero: 2-2!

18 June ** GROUP UPDATE **

① ♀578 moved to Blom 2 25 April 1982

Last seen at Road 1 23 April, at Blom 2 25 April

4 July Afterthought on disappearance of the fifth nestling (see 13 June notes). My bet is that the nestling just plain fell out of the nest. See 1500, Dark Hollow notes

18 Aug Counted stores, 0930

Valley Oak	40
Sycamore	<u>0</u>
TOTAL	<u>40</u>

23 Aug ** GROUP UPDATE **

① ♀578 Returned to Road 1 18 June $\pm$ ⁵ days See Blom 2 notes

② J805 J807 NSAB 13 June

Not seen After Banding

Melanerpes formicivorusRoad 1

27 Oct Good granary census here. All birds seen, lots of storing.

First half of the watch, nearly all the activity was in the 2^o, second half the 1^o. ♂294 made a very good showing today, probably because I was using a blind. I think he's bothered by me if I don't.

30 Oct Rainy afternoon, but a good granary census anyway.

See back. All birds seen, and a fair amount of acorn storage.

31 Oct Granary census, Pretty slow, despite warm, sunny AM.

Just a little acorn storing

	Storage
1025 ♀269 MA 2 ^o	
30 ♀269 ♀804 SA 1 ^o ♂579 ♂580 WH 2 ^o	unk 1 ♀383 1
35 ♀383 WH 2 ^o	
40 ♀383 ♂579 2 ^o	♂579 111
45 ♀383 WH ♂579 2 ^o	
50 ♀383 ♂579 2 ^o	♂580 1
55 " " "	
1100 ♀269 SA 2 ^o	♀269 11
05 ♀383 ♀269 EA 1 ^o	
10 ♀578 ♀269 ♀383 1 ^o	♀804 1
15 ♂294 2 ^o ♀269 ♀383 ♀578 1 ^o	♀578 1
20 ♀383 ♀269 ♀578 1 ^o	
25 ♀383 ♀578 WH 1 ^o ♂579 2 ^o	
30 ♀383 WH ♀269 1 ^o ♂579 WH 2 ^o	♂294 1
35 ♀383 " " " " " "	
40 ♀269 WH ♀383 1 ^o ♂579 WH 2 ^o	
45 ♂579 WH 2 ^o ♂672 WH 2 ^o	(10) (1)
50 ♂579 WH 2 ^o ♂672 2 ^o	
55 ♂579 ♂672 WH 2 ^o ♂294 WH 2 ^o ♀578 1 ^o WH	(11)
1200 ♀578 1 ^o WH ♂672 2 ^o WH ♂294 2 ^o WH	
05 ♂294 ♂672 2 ^o WH	
10 ♂294 WH 2 ^o	
15 ♂294 2 ^o	
20 nobody	
25 ♀383 SA 2 ^o	
Defence	
1110 ♀578 Plain tit	

27 Oct 1982 Road 1 Granary census 0840-1040

0840 ♀383 WH 2° | nobody 1°
45 ♀383 WH, ♂486, ♀269, ♀578 2° |
50 ♀383 WH 2° | ♀269 2°
55 ♀804 WH 2° |
0900 ♂672 SA 2° |
05 ♂672 SA ♀383 ♀578 WH 2° |
10 ♀804 SA 2° |
15 ♀804 SA ♀269 SA 2° |
20 ♀383 1° |
25 ♀804 WS 2° | ♀269, ♀383 ♂672 ♂580 | ♂579, ♀578 WS 1°
30 ♂580 ♂486 2° | ♀804 ♂672 ♀383 1°
35 ♂486 2° | ♂294 ♂580 1° WS
40 ♀578 1° | nobody 2°

0945 ♀578 ♂672 1° |
50 ♂580 SA ♀578 WH ♂672 1° |
55 ♂486 ♂580 WH | ♂294 SA 1° |
1000 ♂294 MA, ♂804 WH 579 WH, ♂580 1° |
05 ♀578 MA | ♀269 ♂672 SA | ♂579 WS all 1°
10 ♂579 MA | ♀578 WS ♂294 SA all 1° | nobody
15 ♂294 SA ♂486 MA ♀578 WS ♂579 WS all 1° |
20 ♂294 ♂580 ♂672 SA 1° |
25 ♀383 WS ♂486 WS | ♂579 ♂580 SA 1°
30 ♂294 SA ♀578 WH | ♂672 ♀804 all 1°
35 ♀383 ♀578 ♂580 SA 1° | ♂579 ♂672 WS ♂4
40 ♀578 WH ♂580 1° | ♂579 WS ♂4

		storage	5th-	2nd hr
(4)	♂486			
(7)	♀578			
(6)	♀269			
(4)	♀383			
(8)	♂672			
(9)	♂579			
(9)	♂294			1
(3)	♀804			
(6)	♂580			
(2)	unk			

defence
0848 ♀269 Tit 1
♀120 ♀383 AU? 3
0930 ♀383 W. Tanager 1
♀578 1

(35)

(23)

TOTAL 58 (29/hr)

30 Oct 1982 Road 1 1415-1615

1415 ♀269 WH 2° |
20 ♀269 WH 2° |
25 ♀269 ♂580 SA 1° | ♂672 SA 2°
30 ♂579 SA 2° | ♀269 SA 1°
35 ♀269 ♀383 1° | ♂294 WH 2°
40 ♀269 ♂672 1° | ♂294 ♂486 ♂579 WS 2°
45 ♀383 ♀804 ♂294 ♂579 2° WS, ♂486 2° | ♀269 ♂672 1° | ♂580 1° WS
50 ♀269 ♂672 1° | ♀383 ♀804 ♂486 2° | ♂294 2° WS
55 nobody
1500 ♀383 2° WH
05 ♀383 2° WH
10 ♂294 ♀383 ♂580 ♂486 WS 2°
15 ♂294 ♀383 ♂580 ♂486 2° (doing nothing)

1526 ♂294 ♂486 ♀383 ♂580 2° WS
25 ♂580 ♀269 ♀383 ♂294 WS 2°
30 ♂580 WS 2° | ♀383 1°
35 ♂486 ♂294 ♂580 ♀383 ♀804 2° WS |
40 ♀578 SA ♂672 ♂486 ♂804 WH, ♂294 2° | ♀383 1° E
45/50 ♀269 WH 1° | ♀578 ♂486 ♂579
50 ♂294 WS ♀383 MA ♀269 WH 1° | ♂486 ♂579 ♀578 WH 2°
55 ♀269 ♂294 WS 1° | ♂672 ♂486 ♂579 WH 2°
1600 ♂294 WS 1° | nobody 2° | ♂672 1°
05 ♀383 SA ♀804 EA 1° | ♂294 WH 2°
10 ♀383 WS ♀804 1° | ♂294 WH 2°
15 ♂672 ♀804 WS 1° | ♂294 WH 2°

storage

♀269		
♀383		
♂580		
♂672		
♂486		
♂579		
♂294		
♀804		
♀578	(14)	(8)

(27) 13.5 / hr.

Melanerpes formicivorusRoad 1~~Melanerpes Road 1~~

- 29 Nov Good granary census here. All birds seen. Details on back.
- 2 Dec Final fall granary census, 1405-1605. (Alan did the 8-10 one here today). Complete census.

29 November 1982

Road / granary census

1055 ♀269 EA 2°
 1100 ♀269 2°
 05 ♀269 | ♂294 ♀383 WH 2°
 10 nobody
 15 "
 20 "
 25 "
 30 ♂580 ♀578 ♀383 WH 2° | ♂486 WH 1°
 35 ♂580 ♀578 ♀269 ♂294 WH 2° | ♀383 1°
 40 ♂580 ♀578 ♀269 ♂294 WH ♂579 MA 2° | ♀383 1°
 45 ♀578 ♂579 ♂294 WH ♀269 ♂580 2° | ♀383 1°
 50 " " " ♀269 WH ♂580 2° | ♀804 EA ♀383 1°
 55 ♀578 ♂580 ♀269 WH 2° | ~~MA~~ 1° nobody

1200 ♀578 ♂672 1° | ♂486 ♂294 ♀269 WH 2°, ♀804 2°
 05 " " | ♂294 ♀269 WH 2°
 10 ♂580 SA 1° | ~~♂294~~ ♀383 ♀578 WH 2° ♀804 WH
 15 nobody 1° | ♀383 WH 2°
 20 ♂294 ♀578 SA 1° | ♀269 SA 2°
 23 ♂579 1° SA 0 ♀578 1° SA | nobody 2°
 30 nobody 1° | ♂294 WH ♀578 EA 2°
 35 " " | ♂294 ♀383 ♂580 WH 2°
 40 ♀383 SA 1° | ♂580 WH 2°
 45 ♂486 ♀269 SA 1° | ♂580 WH 2°
 50 ♀578 WH 1° | nobody 2°
 55 ♀578 WH 1° | " "

Storage (all 2nd hour)

④ ♂580 IIII
 ⑫ ♀383 HT HT II
 ⑦ ♀269 HT I
 ⑤ ♀578 HT
 ① ♂294 I
 ⑤ ♂579 HT
 ⑤ ♂486 HT

(39)

defence

1245 ♂486 Plain Tit |
 1254 ♀578 ")

2 Dec 1405 - 1605

1405 ♀269 ♀383 SA 2°
 10 nobody
 15 "
 20 ♂579 WH 2°
 25 ♂486 WH 2°
 30 nobody
 35 "
 40 ♀383 WH 2°
 45 ♀383 MA 2°
 50 nobody
 55 ♂579 WH 2°
 1500 " " "
 05 nobody
 10 "
 15 ♀269 ♀383 ♀578 ♂294 WH 2°
 20 ♂486 WH 2°
 25 ♂580 SA 1° | ♀383 ♀578 SA 2° ♂486 WH 2° ♀269 SA 2°
 30 ♀383 WH 1° | ♂486 ♀269 ♂580 ♂294 WH 2°
 35 ♀383 ♂580 WH 1° | ♀269 ♂486 ♂294 WH 2°
 40 ♀383 ♂580 1° | ♂486 ♂294 WH 2° ♀269 2°
 45 ~~♂580~~ ♂580 1° | ♀269 WH ♂294 MA 2°
 50 ♂580 1° | ♀269 ♂486 2°
 55 " 1° | " " 2°
 1600 " " | ♀269 2°
 05 nobody 1° | ♀804 MA 2°

Storage

♀269 I : III
 ♀383 II : II
 ♂579 II
 ♀578 II : I
 ♂580 I
 ♂486 I
 ♂294 II
 ♂672 I

(8)

(10)

(18) stored

don!

♂294 > ♂580

chatters

+ pecks

Melanerpes formicivorusFinchHastings Reservation

19 Jan Looking here with Alan, 1120, Birds still storing Live Oak acorns in the Valley Oak. At least 3-4 stored in the 15 min we watched. Only ♂66 and ♂63 seen well. At least 1 ♀ around.



Melanerpes formicivorusFinch

7 Feb Took a sample of about 25 acorns from a low limb in the Valley Oak grove. All appeared to be Live Oak. Replaced them with a roughly equivalent number of my own.

8 Feb Counted stores, 1400:

Valley Oak 480

Misc. limbs 125

Sycamore 670

1275

TOTAL

24 Feb A quick look here, 1415, it appears to be status quo. No "breeding" ♀ here yet, anyway. In a quick watch, I spotted ♂63, ♂66, ♂282, ♂540, ♀541, ♀543, ♀614, ♂616. Only ♂501, ♂542, ♂613 not seen, but I'm sure one or more of them are still around.

29 March Counted stores, 1650:

Valley Oak 665

Misc. limbs 80

Sycamore 455

1200

TOTAL

Many birds (~10) were in the sycamore as I drove up, all harriting (also saw a bit of aggression, I do believe), making me believe that the long-awaited power struggle was finally in progress here. However, everybody flew off toward the ^{Flycatching} Valley Oak, and the only bird I did was ♀541 ^{Black-Yellow/Mauve}

16 April Uh-oh! At 1550, I find a ♂ looking out (and sitting tight) in the 1980 nest hole. No need to panic yet, but it will require some worry & further checking.

Melanerpes formicivorusFinch

18 April Back by at 1750, Nobody in the 1980 hole this time.

24 April A quick watch here, 1500-1530. Obviously status quo.
 ♂66, ♂282, ♂501, ♂540, ♀541, ♂542, ♀543,
 ♀614, ♂616 all see well. No sign of a new ♀
 No interest in any holes.

4 May Pa- reports ♂542 near Blom 1, Flying
 toward Corral Viejo.

7 May Sitting in the truck here, I see a bird make a very
 brief entrance into a hole at the top of the sycamore hole
 stub. Doesn't look serious, but I will have to be
 alert here.

27 May Whoa, as I drive up here at 1030, 2 birds were in the
 1980 nest hole. One flew out, but the other stayed in and
 looked out.

Back at 1155 for another look, I say "hello", and a
 bird looks out, then flies off. If this keeps up I will
 have to check that hole.

29 May 1700, again a bird looking out of the 1980 nest
 hole. I return with Alan + the extension ladder
 at 1800. I climb up + find 4 eggs, 3 normal
 + 1 runt, about 4-5 days incubated, I would guess.
 Which ♀ (or ♀♀) laid these? Alan watched here
 last week and saw only the 3 "helper" ♀♀, no
 new ♀ at all. We probably had rampant inbreeding, but
 there is no way we'll ever figure out who did what.
 Watching the nest will probably help, but I can't
 think of how it could completely resolve things.

(see nest
 record)

1982 R.L. Mumme

Melanerpes formicivorus

Finch Nest Record

29 May Surprise nest in old 1980 hole, checked 1800
eggs ~ 4-5 days 4 eggs
marked + measured:

① 24.9 x 19.5

② 18.7 x 15.0 (runt) did not hatch

③ 26.1 x 20.0

④ 26.1 x 18.7

10 June 1130, Nest check

→ 816
①
Or-L Blue

22.8g

→ 817
②
NB

20.0g

2 young

runt present, but
no sign of third normal
egg.

25 June wt 83.0g

93.0

1445 wing 77

71

crown
sq.

1

2

Banded both nestlings, how J817 + J816

1982

R.L. Mummie

48

Melanerpes formicivorusFinch7 June

Counted stores, 0830:

Valley Oaks 120Odd branches 0Sycamore 160280

TOTAL

Nest is still active here.

10 June

Checked the nest, 1130:

Two healthy nestlings

~6 days old, an unhatched runt, and no sign of the third egg-or-baby. No obvious inbreeding depression here, I'm afraid. Anyway 26 June would be a good day to band these birds.

25 June

Banded the two young here, now Juv ~~816~~
816 + 817. Both quite healthy. See nest record.

20 July

Brief watch here, 0800-0845. Both juvies are here:

J816 ^mwht/DBlue-Green + J817 ^{white-or/m}Or-wht/Orange, looking hale & hearty. ♂66, ♂282, ♂501, ♀541, ♂542 also seen. No juv dominance, but I did see ♂501 peck the daylight out of both babies.

26 July

Watching for juv dominance, 0830. Wow, almost instant success! 0845 in the sycamore along the S side of the road, 50m upstream from the bridge, J816 wht/DBlue-Green gave two firm, separate pecks (2 different instances) to J817 Or-wht/Or. Adults were present at first, but not during the second.

0950, again J816 pecks J817, in sycamore, being fed by ♂66. 1000, end. Good watch! ♂63, ♂66, ♂282, ♂501, ♂540, ♀541, ♂542, ♀543, ♂613, ♂616, J816, J817 all seen well.

Juv. Dom
→

Finch dom.

J816 $\rightarrow$ J817 |||

21 July

~~Allen~~
1982

R.L. Mumme

5

Melanerpes formicivorus

Finch

18 Aug

Counted stores, 0915:

0

TOTAL

Melanerpes formicivorusRoad 312 Jan ** GROUP UPDATE **

① ♂618 disappeared 20 Oct 1981 $\pm \frac{1}{2}$ day
 Present 19 Oct, absent 21 Oct + thereafter

23 Jan Alan watched here with some success. See his notes

25 Jan Granary census, 1420-1620 Still a lot of live oak
 storing going on. I missed seeing ♂708, ♂709, ♀710.
 Alan saw 710 2 days ago, but he missed 708 + 709, too.
 Maybe they've dispersed. ♂184, ♀265, ♂68, ♂537,
 ♂654, ♂655, ♂656 all seen well.

~~11 Feb~~ ~~Ibama~~8 Feb Counted stores here, 1600:Valley Oak 760Sycamore 13002060 TOTAL

Also took a sample of ~35 acorns, which I replaced with
 a roughly equivalent # of my own. Acorns taken from the
 "crotch" of the sycamore

9 Feb Granary census, 0835 - ~~0910~~ 1035. Wow, a very impressive
 storing frenzy here, despite the late date. 45 acorns in the first
 hour, 58 in the first 75 minutes. All live oak acorns (of course).
 The birds appear to be harvesting them from a tree overhanging
 the road (from the PO Hill side) about 50 m down the road
 from the granary. Twice (♀265 once, an unknown bird the 2nd
 time) I saw birds bring partially germinated acorns to the
 granary! The one that ♀265 had had a radicle about 2 cm
 long, the other was about 5 mm. Could the birds be
 getting some of these off the ground? Certainly not all

Rd 3 granary census 25 Jan 1982 1420-1620

1420 ♀265 ♂655 WS

25 ♀265 ♂184 WS (MA) ♂654 WS

30 ♂654 ♂656 ♀265 WS

35 ♂654 SA ♂656 WS ♀265 SA

40 ♀265/♂656 WS

45 ♂537 ♂654 WS

50 nobody

55 ♀265

1500 ♂184 SA, ♂68 ♀265 WS

05 ♂68 WS, ♂184, ♀265, ♂655

10 ♂184 ♂656 SA, ♂68 ♀265 WS

15 ♂537 ♂655 SA, ♂654 SA, ♂184 WS 'sun down'

20 ♂184 ♂654 WS

25 ♂184 WS, ♂654 ♀265

30 " "

35 " "

40 ♂655 ♀265 ♂184 WS, ♂656 ♂68

45 ♂68 ♀265 WS

50 ♂68 ♂655

55 ♂68 ♂184

1600 ♂537 ♂68 WS, ♂184

05 ♂537 ♂184 ♂68

10 ♂537 ♂68 ♂654

15 nobody

20 ♂184 EA

Storage hr 1 hr 2

♂656 II (2)

♂654 III I (4)

♀265 III (3)

♂537 II I (3)

♂655 II (2)

♂184 II III (3)

unk I (1)

18 9/hr

no defense

9 Feb 1982 Rd 3 0835 - 1035

0835 ♂184 ♂654 WS

40 ♀265 ♂655

45 ♀265

50 ♂537 SA ♀265 WS

55 ♀265 ♂68 WS, ♂184 ♂537 SA

0900 ♀265 WS

05 nobody

10 ♂184 WS ♀265 SA

15 ♂184 SA ♀265 WS

20 ♂537 ♂654 ♀265 WS

25 ♂68, ♂654 WS

30 nobody

35 ♂184 WS

40 ♂68 ♂184 WS

45 ♂537 ♂68 ♂655 ♀710 ♀265 WS

50 nobody

55 ♀265 WS

1000 ♂537 WS

05 ♂68 WS

10 nobody

15 ♂184 WS

20 ♂68 SA

25 ♀265 ♂655 ♂184 WS

30 ♀265 ♂654 WS

35 ♀265 ♂184

extras, after census,

storage

II	(11)	♂68	III	III	II
II	(16)	♂537	III	III	III
III	(25)	♂184	III	III	III
I	(7)	♂655	I	III	I
I	(8)	♂654	III	III	
	(11)	♀710	III	III	II
III	(21)	unk	III	III	III
	(8)	♀265	III	III	III

(45) (62)

0932, ♀265 generation

defense

107 in 2 hrs

0948 AW ? ? 3

53.5/hr

Melanerpes formicivorusRoad 3

(1 Feb) the acorns were coming from the ground. Several were brought in with caps, and ♂184 brought in one with foliage attached.

Another ♂ helper is missing here. ♂656 not seen at all, and with all this activity, I should have seen him.

Wow, last half hour, an incredible frenzy. I couldn't keep up with all the storing. This time birds were harvesting the acorns from trees either on PO hill or on the flat just ^N E of the granary.

Birds were also storing a few acorns in the broken VU 20 M north of the main area.

1050, I find the tree from which birds were gathering acorns earlier. On PO hill side of road, right next to road (and 2 small sycamores) 50 M down from granary area. Acorns visible in the tree, as well as a few on the ground.

Anyway, ♂184, ♀265, ♂68, ♂537, ♂654, ♂655, ♀710 all seen well & repeatedly. ♂656 missing. ♂♂708 + 709 definitely gone.

18 Feb Granary census, 1115 - 1315. Just a couple of acorns stored, but a lot of action nonetheless. Birds moving acorns all around.
 ● Complete census, as on 9 Feb, but ♂656 is still here. Birds are still interested in their new roost hole.

19 Feb Good watch. Almost complete census during another granary census, 1415 - 1615. All but ♀710 here. A lot of action in the granary once again. Only 3 acorns stored, so they are definitely winding down as far as storing goes.

[End of file]

18 Feb 1982 Rd 3 Granary census

1115-1315

1115 ♂537 WS | ♀265 | ♂184 WS
 20 ♂68 MA | ♂654 ♂184 WS; ♂655 MA
 25 ♂184 | ♂655 ♂537 WS |
 30 ♂68 WS | ♀265 ♂655
 35 ♂68 EA | ♀265 |
 40 ♂656 WS | ♂68 WS | ♂655 WS | ♂184 WS
 45 ♂656, ♂184 | ♂68 WS
 50 ♂656 ♀265 EA | ♂68 WS
 55 ♂537 ♂184 WS | ♂655 WS
 1200 ♂655 WS | ♂184 WS | ♂654 WS
 05 ♂654 ♂655 WS |
 10 ♀265 WS | ♂654 WS
 15 ♂184 MA | ♂655
 20 ♂68 ♀265 MA |
 25 ♂68 | ♂654, ♂655 WS |
 30 ♂654 WS | ♂655 MA
 35 ♂654 ♂655 |
 40 ♂68 WS | ♂537 MA | ♂654, ♂655, ♂656
 45 ♂68 WH | ♂184 MA |

Storage
 ♂655 |
 ♂537 |
 defense

1210 ♂655 Steller Jay
 1305 ♂184 " "
 ♂537 " "

dom
 ♂184 → ♂656

50 ♂68 WH | ♀265 | ♂184 WS
 55 ♀265 WH | ♂655 MA |
 1300 ♂537 WH | ♀265 ♂68 WS | ♂654 WS |
 05 ♂537 WH | ♀265 ♂68 WS | ♂184 MA | ♂655
 10 ♂68 MA | ♂537 |
 15 ♂184 WH WS |

19 Feb 1982 Rd 3

1415-1615

1415 nobody
 20 ♂537 ♂68 WS
 25 ♂537 MA | ♂68 WS ♀265 WS
 30 ♂184 WS ♀265 MA,
 35 ♀265 WS | ♂184 EA |
 40 ♂537 ♀265 MA | ♂655 ♂656
 45 ♂537 ♂184 MA | ♂68 MA
 50 ♂68 ♀265 WS | ♂654
 55 ♀265 ♂184 ♂68 WS | ♂537 MA | ♂654 WH |
 1500 ♀265 ♂184 ♂68 ♂537 ♂654 all WS |
 05 ♂68 ♂537 ♂655 WS
 10 ♂68 ♂537 ♂184 WS | ♂655
 15 ♂184 MA | ♂68 ♂537 WS | ♂655 ♂654
 20 ♂537 ♂68 WS | ♂655 ♂654 ♀265 ♂184
 25 ♂537 MA | ♀265 WS
 30 ♂184 ♂655 WS | ♂654 MA
 35 ♂654 ♂68 MA | ♂184 WS | ♀265
 40 ♂537 SA | ♂655 ♂184 MA |
 45 ♂537 WH | ♂184 MA | ♀265
 50 ♂537 WS | ♂184 ♀265 WS
 55 ♂537 ♂184 WS | ♀265
 1600 ♂184 WS | ♀265
 05 ♂184 WS ♂68 WS | ♂654
 10 ♂184 WS
 15 ♂184 WS | ♂68

Storage
 ♂68 | 1 |
 ♂537 | 11 |

no defense

Melanerpes formicivorusRoad 3Hastings Reservation21 Feb

Unusually slow granary census, 1150-1350, on a very warm sunny day. Only the core 3 (♂184, ♂68, ♀265) seen. Other birds heard off to the side of RC Hill, but nobody else came to the granary. Maybe it's such a nice day, all the helpers are out exploring for breeding vacancies.

24 Feb

A late "0800" granary watch, 0900-1100. Complete census, save for the elusive ♀710: ♂♂184, 68, 537, 654, 655, 656 & ♀265 all seen well. Surprisingly, a lot of dominance action, including ♀265 pecking at ♂ Junies. Interesting! Also, ♂184 and ♂68 showed a bit of interest in the 1979-80-81 nest hole, so they may yet choose it.

10 March

** GROUP UPDATE

♂709, ~~♂710~~⁷⁰⁸ disappeared 25 Nov 1981 ± 2 weeks

Both were last seen on 6 Nov, certainly gone by 14 Dec. Could they have dispersed (along with ♂618) or are they dead?

29 March

Counted stores, 1730:

Valley Oak 975Sycamore 16252600

TOTAL

Doesn't appear that guarding of ♀265 has begun yet. A bird, I'm fairly certain was her was in the top of the Valley Oak when I drove up, unattended by any other bird. A ♂ was looking out of the 80-81 nest hole, so perhaps they will nest there again.

30 March

A quick look, 12030: No evidence of mate guarding or a nest in progress.

Road 3 granary census, 1150 - 1350, 21 Feb 1982

1150 nobody

55
1200
05
10
15

20 ~~184 MA, 184 MA, 184 MA~~

25

30 ♂184 SA ♂68

35 ♂184 WH, ♀265 WS, ♂68 MA

40 ♂184 WS

45 nobody

50 "

55 "

1200 ♂184 WS ~~MA~~ ♂68 EA

05 ♂184 ♂68 WS, ♀265

10 ♂184 ♀265 WS, ♂68

15 ~~♂184~~ ♀265 WH, ♂68 MA

20 ♂68 MA

25 nobody

30 "

35 "

40 "

45 "

50 "

Storage

♂184

1

24 Feb 1982

0900 - 1100

0900 nobody

05 "

10 "

15 ♂68 WS, ♂184

20 ♀265 MA, ♂68, ♂654, ♂655 all WS

25 ♂68 ♀265 ♂655 WS

30 ♂68 MA ♀265 ♂654

35 ♂68, ♂655 WS

40 ♂184 MA, ♂655 ♀265 WS

45 ♂184 ♂68 ♀265 ♂655 all MA

50 ♂184 ♂68 ♀265 all WS, ♂654, ♂655

55 ♂68 ♂184 WH

1000 ♀265 MA ♂184 MA

05 ♂184 WS, ♂656

10 ♂184 ♂656 ♂537 all WS, ♀265

15 ♂68 WH, ♂537, ♂655, 656 all WS

20 ♂68 WH

25 ♂68 WH, ♂184 ♀265, ♂537, ♂654, 655 656 all WS

30 ♂68 EA, ♂184 ♂654 ♂655 ♂656

35 ♂68 ♂184 ♂655 WS

40 ♂68 ♂184 ♂654 ♂656 WS ♂537 WH

45 ♂537 WH | ♂654 ♂184 WS | ♂68

50 ♂537 MA | ♂654 WS | ♂655 WS | ♂184

55 ♂537 WH | ♂655 ♂184 WS | ~~♂68 MA~~ ♂68 MA

1100 ♂68 ♂184 WS | ♀265 WS | ♂655 WS

defense

0958 ♂184 AW? 2

Storage

♂68

1

♂654

1

0918 ♀265 approaches,

♂654 chatters

0923 ♀265 pecks at ♂655

gently

0935 ♂184 pecks hard at ♂655

0941 ♀265 pecks hard at ♂654

Melanerpes formicivorusRoad 3

(30 March) ♀265 spend several minutes (1248-1258.) excavating a new hole, just above the 1981 2nd-nest hole. See drawing on back. At present, the hole seems to be only big enough to accomodate the head of ♀265. No sign of interest in the hole overhanging the road, thank god. Ala- reported significant interest in the 1980-81 nest hole a few days ago.

2 April

Watching here, 1005. Several developments: ① ♀265 spent 5 min (1015-1020) working on the excavation figured on the back. Still just a head hole. She also entered the 1980-1981 hole and removed wood chips, so that hole must once again be considered the leading candidate. ♀265 also looked into the VO hole, and ♂654 looked at the new overhang hole. ② ♂184 is missing! Complete census otherwise: ♂68, ♀265, ♂537, ♂654, ♂655, ♂656, ♀710 all seen very well + repeatedly. Seems like I should have seen him. ③ Assuming ♂184 is here, ♀ guarding certainly hasn't started. ♀265 was constantly in the granary, and ♂68 was around most of the time too. However, ♂68 did not escort ♀265 into the nest hole, and from 1130 - 1142 ♂68 worked on the new hole, too.

6 April

1235, as I drive up ♀265 is in of the 1980-1981 hole. She leaves 1245, then flies off toward PO Hill followed by a ♂ that I thought was ♂654! It could have been ♂68, I suppose, or it could have been an incidental follow. I should peep into the hole here later today to be sure. Incidentally, Ala- watched here 4 April, seeing no trace of ♂184.

1440, Checked the hole: NO eggs!

1980-81

← New hole

← 1981 SP (ond nes r

Melanerpes formicivorusRoad 3

12 April After Alan reported more activity in the 1980-81 nest hole,
I check it at 0920: No eggs.

16 April Watching here, 1430, for any evidence of ♀-guarding or
activity in any holes. A definite yes for the latter: About
1445 ♀265 entered the 80-81 hole, and ♂68 followed
her in about 1455: ♀265 left about 1415, But ♂68
Stayed in, and did not follow the ♀ out. Unfortunately, ♀265 stayed
around the granary area, so I couldn't truly call it a FTF.
However, ♂68 was down (not looking out) virtually all the time
he was in the hole alone: So ♀265 was out of visual
contact. Will check hole later:

Later, 1745, I climbed up + peeped in. No eggs!

20 April Alan has been reporting ♂68 guarding ♀265, so I
check the hole at 1800: Still no eggs.

22 April Checked the hole, 1600: No eggs!

24 April Checked the hole, 1330: Still no eggs, despite
the fact that Alan reports half-hearted guarding of ♀265

26 April checked the hole, 1500: Still nothing

27 April " " " 0815 (0915): Still nothing

29 April Zou-ds! I check the nest at 1500, 2 eggs!!

So laying began on 28 April, with one egg on each day!

3 May Check the hole, 0800: 4 eggs, but they are cold, what gives?
Actually, Alan watched the hole later, & incubation
was going on no problem. Anyway, this means
I should expect hatching about 11 May,
banding around 2 June

16 May Checked hole, 0730: 4 healthy babies, marked + weighed
(see nest record)

1982 R.C. Mumme

Melanerpes formicivorus

Road 3 Nest Record

27 April Checked the 1981 hole, 0815 No eggs

29 April Checked the hole via peeper, 1500 2 eggs

3 May ~~27 May~~ Checked the hole, 0815 4 eggs

eggs cold: not yet incubated? ① 25.2 x 19.8

② 25.2 x 19.8

③ 25.2 x 20.1

④ 26.0 x 20.3

16 May nestcheck, 0730, all 4 eggs hatched 4 nestlings
(→792) (→793) (→794) (→795)

① LBlue-Yellow

② Wht-DBrn

③ B/K-Yellow (lv)

④ NB

26.5 g

19.8 g

19.0 g

13.5 g

2 June wt 97.0 g

84.0

87.0

78.0 g

1500 wing 92

82

84

77

crown 1

2

3

4

Banded all 4 nestlings, now juvs # 792-795.

1982

R.L. Mumme

6

Melanerpes formicivorusRoad 3

0900

23 May

Minor disaster here. A car from the Irvine field ornithology class found two Road-killed woodpeckers from here. They prove to be ♂537 ^{Or / M} wht/or and ♂655 ^{Yellow-wht / Yellow-Blk} M / Yellow-Blk. Neither bird was particularly fresh, so they were probably nailed yesterday. (22 May)

2 June

1500, despite the loss of the two ♂ helpers, I band 4 healthy nestlings here, now Juvs. 792 - 795

7 June

Counted stores, 0900

Valley Oak

150

Sycamore

175

TOTAL

32518 June

** GROUP UPDATE **

① ♂184 disappeared ~ 30 March 1982

Present 28 March, definitely gone 1 April

② ♂537 + ♂655 Road killed on 22 May 1982

18 Aug

Counted stores, 0900:

Valley Oak

25

Sycamore

0

Plus various bits & pieces.

Total

25

Also got a pretty good 5 min watch in: ♂68, ♀265, ♂654, ♀710, Juvs. 792, 793, 794 all seen well.

23 Aug

** GROUP UPDATE **

① J795 Not seen after banding 2 June 1982

5 Oct

Good watch, 0730-0930: ♀265, ♂68, ♂654 ♀710 all seen well, plus J792 + J794, both molting into ♀ plumage

Also saw ♀668 Blk-Grn / Black of Still-T (!) intruding here
NO Acorn storage yet!

Melanerpes formicivorusRoad 3

27 Oct Came out here to do a granary census, but found very few acorns stored in the granary. I'll wait until the birds here are a bit further along.

8 Nov Good granary census here, 1400 - 1600. Important items to note are ① ♂656 and ♀793 must surely be gone. Didn't see them on 5 Oct or today. Everyone else seen. ② On 5 Oct I prematurely called ♀792 ♀. It is definitely ♂792.

11 Nov Strange granary census. Only ♂68 + ♀265 seen, plus ♂654. Where the other 3 birds are, I have no idea.

12 Nov Great granary census, 0830 - 1030. 140 Acorns stored in the two hours! Not bad at all. All 6 birds seen.

0830 ♀265 / ♂654 SA

35 ♂654 ♀265 WH / ~~♂654~~ ♂68 EA ♀710 WH

40 ♂654 ♂68 ♀265 ♀710.

45 ♂654 ♂68 ♀265 WH / ♀710 ♂792

50 ♂654 ♂68 ♀265 ♀710 WH / ♂792

55 ♀265 ♂654 ♂68 ♀710 SA

0900 ♀265 ♂68 SA ♂654 SA

05 ♂68 ♀265 SA

10 ♂68 ♂654 ♀794 SA

15 ♂68 SA

20 ♀265 ♀710 SA

25 no body

30 ♂68 ♀265 SA

35 ♂68 WH ♀265 WH

40 ♂654 SA ♀265

45 ♀265 WH ♀710 ♂654 SA

50 ♂654 ♂68 SA ♀265 WH

55 ♂68 WH ♀265 ♂654 SA

1000 ♂792 SA ♂654 WH ♀265 WH

05 ♀265 WH

10 ♀265 ♂68 WH

15 ♀265 ♂68 WH

20 ♀265 ♂68 ♂792 WH

25 ♀265 ♀710 WH ♂68 WH

30 ♂654 ♂792 SA / ♂68 WH

Storage hr 1

♂654 IIII IIII IIII II

♀710 IIII IIII IIII I

♀265 IIII IIII IIII

♂68 IIII IIII IIII III

♂792 IIII II

♀794 IIII II

unk IIII IIII

(89)

140

Grand total

hr 2

Waste

(25)

♂68 IIII II

(22)

♀265 IIII IIII

(25)

♂654 IIII IIII

(32)

♀710 IIII IIII IIII I

(51)

(9)

♂792 II

(8)

♀794 I

(19)

unk IIII IIII

8 Nov 1982 Road 3 granary census

1400 nobody

05 ♀265 ♀710 WH
10 ♀265 ♀710 ♂68 ♂654 SA
15 ♀265 ♂68 ♂654 WH
20 ♀794
25 ♀265 ♀710 ♂68 ♂654 WH
30 ♀710 SA ♂68 ♂654 WH
35 ♂68 ♂654
40 " "
45 ~~♂68~~ ♂68 ♂654
50 ♂654
55 "
1500 "

1505 nobody

10 "
15 "
20 "
25 "
30 ~~♂68~~ ♂68 SA
35 ♂68
40 ♂68 ♀265 WH
45 ♂68 ~~♂68~~
50 ♂792 SA ♂68 WH ♂654 WH
55 ♂654 WH
1600 ♂654 ♂68 WH

Storage

unk	1		(1)
♀710		1	(7)
♀792		1	(4)
♂68			(7)
♂654			(2)
♀265	1	1	(2)
♀794			(2)
	(18)	(7)	

1710 ♀265 passerine 1

11 Nov 1982 1030-1230

1030 ♀265 ♂68

35 ♂68
40 ♀265 WH
45 ♀265 SA ♂68 WH
50 nobody
55 ♀265 WH ♂68 MA
1100 ♂68 WH ♀265
05 ♂68 ♀265 MA
10 ♂68 ♂654 ♀265
15 ♂68 WH ♂654
20 ♂654 WH ♂68 ♀265 MA
25 ♂654 ♂68 ♀265 all WH
30 " " " " "

1035 ♂68 ♂654 WH

40 ♂68 ♂654 WH
45 ♂68 ♂654
50 ♂68 ♂654
55 ♂68 WH
1200 ♂68 / ♂654 ♀265 WH
05 " | " " "
10 " | ♂654 WH ♀265 WH
15 ♂654 WH | ♀265 ♂68
20 ♂654 ♂68 WH | ♀265
25 ♂65 ♂68 WH | ♀265
30 ♂65 WH | ♀265

Storage

♀265			(7)
♂68		1	(3)
♂654		1	(1)
	(7)	(4)	

defense

1103 ♂68 Junco 1

Melanerpes formicivorusRoad 3

22 Nov Granary census, 1400-1600; Pretty good. Only bird not seen well was ♀794, even though I have her down as having stored an acorn. Everyone else seen quite well, however.

23 Nov Another granary census, 1055-1255. This time all 6 birds seen well.

29 Nov Final granary census, 0830-1030

0830 ♂654 ♂68 ♀265

35 nobody

40 ♂68 ♀265 ♂654 SA ♀710 SA

45 ♀265 WH

50 ♂68 ♀265 ♀710 WS

55 ♂654 WS, ♂68 SA,

0900 ♀710 SA

05 ♀265 ♂68 WH | ♂654 ♂792 ♀710 SA

10 ♂68 ♀265 WH | ♀710 ♂654

15 ♂792 SA

20 ♂792 WH | ♀710 ♂654 SA

25 ♀265 SA ♀710 WH

30 ♀710 ♀265 SA ♂654 SA | ♂68 WH

35 ♂654 SA

40 ♀265 ♂792 ♀710 ♂68 SA

45 ♂792 SA

50 ♂654 WH

55 ♂654 ♀265 WH

1000 ♂654 ♀265 WH | ♀710 ♀794

05 ♂ ♀265 WH | " " ♂654

10 ♂68 WH ♀265 WH | ♂792 SA

15 ♀265 ♂792 SA

20 ♀265 ♀710 ♂654

25 " " "

30 ♂654 SA ♀794 WH

Storage

(12) ♂68 IIII III

(17) ♀265 IIII II III

(17) ♂654 IIII III

(27) ♀710 IIII IIII II : IIII IIII

(16) ♂792 III : IIII IIII III

(2) ♀794 II

(17) Unk IIII ~~IIII~~ II : IIII IIII

(60)

(48)

108 Total

No defer

Good census. All birds seen, lots of storing

22 Nov 1982 Road 3 granary census

1400 nobody

05 ♂68 ♂654 SA ♀265 WH

10 ♂654 ♀710 SA / ♀265 WH / ♀794 SA

15 ♂68 SA

20 ♂654 SA

25 ♂68 ♂654 ♀265 WH

30 ~~nobody~~ ♀265

35 nobody

40 "

45 ♂68 SA

50 ♂68 WH ♂654

55 ♂68 ♂654 WH

1500 ♂68 ♂654 WH

05 " " "

10 " " "

15 " " "

20 " " "

25 " " "

30 nobody

35 ♂68 SA

40 ♂654 ♂68

45 nobody

50 "

55 "

1600 "

1st hour

34 (3) : II - ♀265 - 1

47 (12) : IIII WH - ♂68 - III

38 (10) : IIII WH - ♂654 - 1

46 (7) : II WH - ♀710 -

16 (3) : III - ♂792 -

11 (1) : 1 - ♀794 -

Unk 20

(31)

(5)

Nodefense

36 stored

23 Nov 1982

1055 nobody

1100 "

05 ♂68 WH ♀265

10 ♂68 WH ♀265 ♀710

15 ♂68 ♀265 ♀710 ♂792

20 ♂68 ♂654

25 ♂68 ♂654 WH ♀265

30 ♂68 ♂654 WH ♀265

35 ♂68

40 ♀710 SA ♀265 ♂

45 ♂68 SA

50 ♀265 SA ♂68 WH

55 ♀265 ♂68

1200 ♂68 ♀265

05 nobody

10 "

15 "

20 ♂654

25 "

30 "

35 ♂68 ♀265 ♂654

40 ♀265

45 ♂654

50 "

55 nobody

1st hr

2nd hr

♂68 IIII 1

♀265 IIII

♀710 IIII

♂654 IIII

♂792 II

♀794 II

Unk II

(6) 53

(4) 38

(4) 50

(4) 42

(2) 18

(2) 13

(2) 22

(24)

1982 R.C. Munroe

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Melanerpes formicivorus

School Hill

9 Feb Counted stores, 1630: 1210 TOTAL

A sample of about 40 acorns taken from the granary. These were replaced by a roughly equivalent # of my own.

1 April Counted stores, 1800: 1200 TOTAL

3 April Alan (2 April) and Leslie (today) have reported a constant stream of birds in + out of a new hole, located in the nearly dead (Blue?) Oak 30 m SW of the SW corner of the enclosure. Lower of two holes. I climbed up to the hole (with some difficulty: a short length of ladder would be easier) and peeped in with the new improved peeper at 1800: No eggs yet, but the hole looks nearly ready: A nice carpet of wood chips. What bothers me is that from what Alan saw yesterday and what Leslie (t L: I showed her around School Hill earlier) saw this afternoon, it doesn't seem like any ♀-guarding has begun. But, we shall continue to keep an eye on things here.

5 April Checked the hole, 1230: No eggs.

7 April " " " 1330: No eggs.

11 April Checked the hole, 1400: No eggs

13 April " " " 1330: No eggs. Leslie reports mate-guarding.

15 April " " " 1800: No eggs: " " NO " "

17 April " " " 1600: No eggs. However, I open it up anyway, since it looks like this will be the nest hole (a ♀ was in as I walked up. When she flushed, 2 other birds perched nearby followed her.

Melanerpes formicivorusSchool Hill

- 19 April Checked the hole via peeper. Still No eggs, 1730.
- 21 April " " " " " Hex, 2 eggs, 1530!
- 28 April Opened the hole today, marked + measured 6 eggs (see nest record for details). This means that egg #6 was laid on 25 April, meaning I should anticipate hatching about 6 May and banding about 28 May.
- 10 May Peeped in here to check for hatching. I'm shy about opening this hole too many times, since the wood is so thin and the whole thing is tough to put back together. Anyway, looking in I saw 2 unhatched eggs (for sure) and I'm ~~fairly~~ fairly sure 4 babies (3 for certain), ~ 4 days old I guessed.
- 28 May Banded 3 young (753-755), 1400. I may have blown the estimate of young on 10 May.
- 5 June Counted stores 0900: 500 TOTAL
- 17 June Around sunset, I flush 2 juveniles from the 1980 failed nest hole.
- 18 June ** GROUP UPDATE **
- ① ♀668 returned to School Hill ~ 20 May 1982 (see Y notes)
- 19 Aug Found all 3 SHill juvies down around Y + Pump, 0700. ~~0800~~. Also, J753 ^{M/wnt-Red} Red-wnt/LBlue seems to be molting into ♀ plumage, while J754 + J755 look like they will be males. Confirmation needed, though.
- 0745, upon SHill proper, ♂86, ♂402, ♀260 all seen well, plus J755 back up here. No sign of ♀668.
- COUNTED STORES 0830: 110 TOTAL

Melanerpes formicivorusSchool Hill Nest Record

- 19 April Checked new hole in partially dead blue oak above the enclosure, 1730: No eggs.
- 21 April Checked hole via peeper, 1530: 2 eggs
- 24 April " " " " 1245 5 eggs
- 28 April Opened hole, 1200 6 eggs
- eggs marked + measured
- ① 24.9 x 20.6
 - ② 25.4 x 21.0
 - ③ 25.4 x 20.0
 - ④ 26.2 x 21.0
 - ⑤ 25.1 x ~~20.0~~ 21.0
 - ⑥ 25.5 x 20.1
- 10 May Peeped in 0945 4 nestlings,
2 unhatched eggs
- 28 May Banded 3 young, 1400. See capture record for weights, etc.



Melanerpes formicivorusSchool Hill23 Aug ** Group UPDATE **

① correction: ♀668 did not return to School Hill ~20 May
see Y notes

9 Dec I walk up here at 1445, and by 1505 I have
a full census: ♂86, ♂402, ♀260, ~~♂~~ ♀753, ♂754,
and ♀ 755 all seen well, working stores in the
granary.

Melanerpes formicivorusSchool Hill West12 Jan ** GROUP UPDATE **① Purge J674 not seen after banding7 May I wander around all over the place up here, but find no suitable holes. Also Alan watched up here recently and saw ♀674! In ♀ plumage! See his notes for details.17 May Well, it takes a while, but I finally find the nest up here. It's in a huge decaying old Blue Oak, ~100 meters SE of the granary. Though the tree is quite dead, it's pretty solid, and I was able to climb on up without too much trouble. Since I didn't bring climbing gear, I'll have to come up later to open the hole. The eggs have hatched, but adults are still brooding.Also, while I was watching, I actually got a complete census. ♀531 ^{Brn-Or/Brn-Or} Brn-Or/M, ♂530 ^{Brn-Or/Brn-Or} Brn-Or/M, and ♀674 ^{M/Brn-Or} Dbrn-Red(N)/Or all seen quite well, all seen carrying insects or acorn bits off toward the nest.18 May Opened the nest here, 1745: Found 4 babies, ~12 days old. Three look quite healthy and should fledge.① A 4th is definitely on the runt side, and may or may not make it. That means I should band this group on 28 May28 May Banded 4 babies, and bled all but the runt, 1500. Now J756-759. The runt was quite tiny, but seemed vigorous. He weighed only 35 grams.18 June ** GROUP UPDATE **① UNPURGE J674. ~~all~~ alive & well

1982 R.L. Mumme

1a

Melanerpes formicivorus

School Hill West Nest Record

17 May Found new nest in large dead Blue Oak 100 m SW of granary. Young have hatched, still brooding.

18 May Opened hole, 1745 4 nestlings

3 healthy, large, 1 runt, ~12 days old

28 May Banded 4 Nestlings, 1500. 3 fine + healthy, one only 34.5 g. See capture records for weights + wing lengths.

Melanerpes formicivorusSchool Hill West

6 Oct Good watch here, 0820 - 0930. The bad news is that ♀ 531 is gone, and in her place is a ♀ NB. I'll have to work on catching her. ♂ 530 BPnk-Or/BPnk is here, however (he is heavily tailspotted, it is worth noting), plus two of the 82 juveniles. ♂ 756 ^{wht-DBlue/DBlue-wht (N)} DBlue-LBlue/m, and ♀ 758 ^{Rd/m} LPnk/DBk. All 4 of these birds were in the granary simultaneously at 0910 scolding some unknown object. No sign of ♀ 674 (was she forced out by the new ♀?) or juvies 757 and 759 (759's chances were small, to say the least). ♀ 758 and the ♀ NB seem to be getting along just fine at the moment. I feel fairly comfortable in saying that these 4 birds are all that are present.

Melanerpes formicivorusARF, too

18 April Still a very few (< 100, maybe 75 or 50 even) acorns remaining in the two granary trees here.

8 May Wandered around quite a bit, looking for holes, nests or birds. No luck on all counts.

19 May Trying to find a nest by watching the birds up here, no luck. All I see is ♀687 Or-Blk/M in ♀ plumage (juv from last year), on 4 different occasions. I never saw her carrying food anywhere, so maybe there is no nest up here.

6 June After considerable pain & suffering here the last two days (5 June & 6 June), I finally find the nest. It is in a thick-trunked, but small crowned, partially dead Blue Oak at the N edge of the ARF field. The nest hole is in a dead stub ~~at~~ and faces more or less north. At 1430 I bring one length of extension ladder up here, climb up, saw open the hole, find 3 nestlings ~ 20 days old, and band them Juvs 798, 799, and ~~800~~ 800!

ARF, too, was not what I really had in mind for the 800th bird, but it will have to do. The hole was a bitch to get back together: Very thin, fragile & rotten, but I think I ~~may~~ managed to make it reasonably secure.

The last two days I've also learned a few neat things about the adults here: ① A ♂ NB is still ~~at~~ present (possibly the same as last year, and ~~in~~ in fact, probably the same as last year (see below), as is ♀687 Or-Blk/M Or-wht/wht-yellow. However, there is no

Melanerpes formicivorusARF, too

(6 June) evidence of ♂635 or a ♀ NB, but I will have to watch the nest here in a few days to be certain they aren't around. ② There is a new banded + presumably breeding immigrant ♀ here: ♀642 Or-DBLue/Yellow Or-DBLue/M who was banded in April 1981 at the big Lower Haystack Power Struggle and not seen since. How about that! My guess is that the ♀NB (the mother of ♀687) disappeared over the winter, and was replaced by ♀642. In this view, the ♂NB is the same as last years, the father of ♀687, which would explain why she is still here. All this is, of course, a hopeless guess given the uncertainties of unbanded birds, but it is probably reasonable.

8 June Watching the nest here, 1620. Definitely a trio here, ♂NB, ♀642, ♀687 and that's all. A good number of feeding visits in 1½ hr. watch (31 visits)

15 June ~~the~~ Tried to ambush the ♂NB here, unsuccessfully. I set up the pole net on the evening of the 14th, watched the ♂NB definitely enter the hole at dusk. But this morning, when I put the net over the hole at 0345, nobody came out. I waited until it was quite light. Either the ♂ left late yesterday ~~the~~ evening, early this morning, or refused to come out of the hole, I don't know

8 June 1982 ARF, too Vest watch 1620-

1620 start

- 26 ♂ (FS)
35 ♂ (FS)
38 ♂ NB (2) I
39 ♂ NB (2) I (FS)
43 ♂ NB (2) I
44 ♂ NB (2) I (FS)
45 ♀ 687 (2) I
48 ♂ NB (2) I Tipulid
52 ♀ 642 (2) I Tip
59 ♂ NB (2) I
59 ♀ 687 (2) I
59 ♀ 642 (2) I
1702 ♀ 687
18 ♂ NB (2)
19 ♀ 642
20 ♀ 687 (2)
23 ♀ 642
26 ♀ 642
29 ♀ 642
31 ♂ NB (2) A
32 ♀ 642
34 ♀ 687
34 ♀ 642
35 ♂ NB
36 ♂ NB (2) A (FS)
37 ♀ 642
42 ♀ 642
42 ♂ NB (3) I
47 ♀ 642
48 ♀ 687 (3)
49 ♀ 687 (2)
50 end watch

Melanerpes formicivorusARF, too18 June

** GROUP UPDATE **

① ♂ 635 disappeared ~ 1 January 1982 $\pm$ 6 months
last seen 13 June 1981, gone 6 June 1982

② ♀ 843 NB disappeared ~ 1 January 1982 $\pm$ 6 months
last seen at ARF, too 30 May 1981, gone 6 June 1982.

(but probably ^{gone} ~~present~~ before April 1982)

③ ♀ 642 moved here ~ 1 January 1982 $\pm$ 6 months
Banded at Low Hay Power struggle April 1981. Present here 6 June 1982

④ J688 NSAB 810606

1982

R.L. Mumme

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Melanerpes formicivorusRARE18 April

Driving by at 1400, Alan + I find a few (<200) acorns remaining in the granary here. Alan saw a bird fly off as we approached. The roost hole in the dead rotten limb of the VO near the granary has fallen, during the winter sometime, I would presume.

8 May

NO luck in finding holes, nests, or birds in a good bit of wandering around.

19 May

Watching here to try to find a nest. I see a ♀ NB carrying insects toward the area south of the granary (on E side of road), in the general direction of the high, Valley Oak hole there, but I wasn't convinced that that was the hole she was flying toward. I will have to try again here.

25 May

Better luck today, as I finally locate the nest. It is in a dead stub of a VO just beside the one mentioned above. The birds are feeding, but not brooding, so I should get up here ASAP. Shouldn't be too much of a problem with the extension ladder.

Back with Alan at 1700, It is more of a problem than I thought. The nest limb is very soft

1 unhatched
egg as well

+rotten, and it was quite dangerous. Nonetheless I managed to band 3 babies ~ 9 days old.

A bit young, but I wasn't going to go up to that hole again! Very difficult to put back together, too. Anyway, the nestlings are now J729, J730, J731.

Melanerpes formicivorusBlack Oak12 Jan

** GROUP UPDATE **

① ♂ 545, ♂ 624, ♂ 691 moved to Lambert 1 Nov 1981 ^{± 1 week}

All were at Black Oak (except 624) on 22 October, but were "present" at Lambert on 10 November. ♂ 689 came originally, but he may be back at Black Oak. Further details are needed.

27 Jan

Alan watched here today with little success. I took a sample of 50 acorns. ♀ 658 or Sobo intruding.

23 Feb

Counted stores, 1030;

Fallen limb 1680Main area ~~1985~~ 19852° area ~~635~~ 635

4300 TOTAL

While counting, in the 2° area I see ♂ 426 13K/or, Wnt-Com/Metal ! Suppose Plus a ♀ whose bands I read as it could be ♀ 320, but ~~that~~ I was pretty certain I saw it right. Will have to look here further. Also, I suppose that I could have blown the sex and seen ♂ 713 instead, but I thought it was ♀. Actually, the quick look I got of the left leg suggested yellow/13K-or, meaning ♂ 713

10 March

** GROUP UPDATE **

♂♂ 546, 689 moved to Lambert 1 March ^{± 1 week}

Two ♂♂ seen participating in the Power struggle at Lambert 20 Feb 1982. Both were missing 23 Feb, but present and looking like they belonged there on 9 March.

♀ 690 Not seen after banding, 81060818 April

Perhaps foolishly, trying to watch from the blind here at

Melanerpes formicivorusBlack Oak

(18 April) 1045. Moved the blind over toward the woods, to get a better angle on the tree tops and the 2° area.

1215, Wow, I actually accomplish something here, (to my considerable astonishment) Details are

① ♂426 + ♂321 both seen well, appear to be following a bird, presumably ♀427 Red/M. However, ♂102 is conspicuously absent. Only 2 ♂♂ seem to be participating in the guarding, u-like last year's tight pack of four

② ♂691 ^{DBlue-Yellow(N)/Lbrn} + ♂689 ^{M/Or} Or/Wht are back here, after toying with the idea of moving to Lambert.

Both were conspicuous here.

③ ♂713 ^{wht-Yellow/M} Yellow / Blk-Orange has been mis-sexed: Actually, a good ♀. This explains my observation of ~~21~~ 23 Feb.

④ I believe ♀320 has lost the Red-Lbrn band on her right leg, making her ^{M/No band} Red-Lbrn / Blk-Mauve. Not absolutely certain, however

⑤ I may have had a glimpse of ♂497 Red/Black, but I couldn't be sure: 1235 whoa, as I leave I see ♂ ^{M/Blk}. Must be ♂497 for sure.

⑥ No sign of ♂546, 545, or 624. Perhaps those three are solidly in residence at Lambert.

⑦ whoops, 1245, walking out I see a "pack" of 4 birds, 3 following 1: Perhaps ♂102 is around after all.

21 April

Counted stores, 1300:	Fallen Limb	<u>875</u>	2° area	<u>250</u>
	Main area	<u>1650</u>	TOTAL	<u>2775</u>

Melanerpes formicivorusBlack Oak

26 April Looks like we have a nest here! At 1720 I find a ♀ (with heavily mustached right face) looking out of the "bad hole" (1981 1st nest hole), in the Valley Oak.

I will have to open it up very soon.

27 April Open up the hole here, 1700: 5 eggs and it looks like the clutch is certainly complete. I marked & measured the eggs. My guess is that this was about day 3 or 4 of incubation. Anticipate hatching about 5 or 6 May, and banding about 28 May. See nest record for other details. Also, I would guess that this is ~~an~~ almost certainly the work of one ♀, and last year's 8-egg clutch probably was, too (since ♀ 320 is still here).

26 May Banded 5 nestlings here today, a very good effort for Black Oak. Juvs # 740 - 744.

<u>7 June</u> Counted stores, 1730:	Fallen Limb	<u>825</u>
	Main Area	<u>1275</u>
	2° area	<u>160</u>
		<u>2260</u> TOTAL

12 June Walked up here 1500 + found a ♀ looking out of the 1981 aborted 2nd nest hole, in the poison oak covered Valley Oak in the 2° area. Looks like we have a second nest here!

14 June 1800, I "try" to get up to check the new nest here, but the string broke on me, and I didn't think to bring a lead weight or new string to get a new line up. I tried to throw the remains of the string up, but

Melanerpes formicivorusBlack Oak Nest Record

26 April 1630, ♀ looking out of 1981 (first nest hole)

27 April Opened hole 5 eggs fairly fresh (day 3)

- | | | |
|---|-------------|-------------------|
| ① | 28.2 x 20.8 | } all
hatched! |
| ② | 25.0 x 19.2 | |
| ③ | 27.4 x 20.9 | |
| ④ | 27.5 x 20.1 | |
| ⑤ | 27.7 x 20.7 | |

14 May Walked by, 1200: Nest still active, eggs have hatched,

26 May Banded 5 nestlings, 1400! Juvs # 740-744

See capture records for weights + wing lengths.

Melanerpes formicivorusBlack Oak

(14 June) using carabeneers, sticks, etc, but gave up after awhile. Also, the eggs have hatched already. I flushed a fledged juvenile and an adult from the nest as I walked up, and heard the peepings of what sounded like just-hatched nestlings. So much for getting egg measurements, and probably clutch size. I will have to try again in a few days. But this means that the two nests here certainly overlapped by at least a week or so.

18 June

** GROUP UPDATE

① ♂689 + ♂691 returned to Black Oak 20 March 1982 ± 2 weeks: ♂689 was still present at Lambert 9 March, back at BO 18 April. ♂691 only seen at Lambert in November then again on 20 Feb 1982, but back at BO 18 April.

5 July

Banded two very anemic young here, 0900. Now Juvs. ~~828~~ 828 + 829. Though they are minimally 21 days old, they are way behind in size. (See capture records). On top of that, their blood was very thin ("iron poor?"), and spun down to only a few red cells and a lot of plasma. I barely got enough for a decent sample.

18 Aug

Counted stores, 1630

Fallen Limb

550

Also good looks at Juvs

Main Area

850

741, 742, 744, and a-OK

2° Area

20

look at J829, all sapsucking from the "traditional" Live Oak sap tree.

1420

TOTAL.

later, J828 and ♀713 seen near Bianca.

Melanerpes formicivorusBlack Oak

7 Oct Trying to watch from blind here, 0800. Choppers aren't good, very breezy. Medlocres 1000, giving up. ♂426, ♂497, ♂691, ♀713, plus J743 ^{Red-Yel/Black} (♂) and J744 ^{LPnk/Red} (♂), ad J829 or DBn/Yellow (maybe ♀, but not sure yet). All that I see. A bit of foraging, but not much. Also, I saw a ♂ adult with just an orange band on the right leg. Probably ♂321, lost his DBlue-Yel (N), but since I didn't see his other leg, I'll have to wait.

14 Dec Watching from blind, 0900: ♀829 chases a ♀NIB from 2° granary at 0910. ♂742 ^{white} ♂497 ♂426 ♂102 (who seems to be missing a band on his right leg) ♂743 ♂321, ♂691, ♂689, ♀713, ♂744 all seen well, and finally, ♀427 Red/M! Alan + I had both watched here and gotten good censuses but failed to see her, but she is alive. Missing was ♀741 but I saw her on 11 Dec near Bianca, and ♀320, who may well be Kaput!

Melanerpes formicivorusSOBO

9 March Shamefully, when Alan + I were up here on 27 Jan, I neglected to write notes on the partial collapse of the SOBO granary. The entire N limb fell during Dec-Jan (I would suspect around Jan 6-7, during the big storm). All that is left of the granary is the south limb, with maybe 500 storage holes maximum.

Watching from the N side of the granary, from hide, 1030. Darned if there wasn't a bird in the granary, when I walked up, which I didn't see until it flushed.

I count ~ 220 acorns from where I'm sitting.

18 April I stroll down to last year's nest to unfortunately find that the entire nest tree has collapsed. Bummer! It means we're back to square 1 as far as discovering where these guys might nest. I flush 2 birds from what's left of the granary at 1300.

26 April False alarm! Not at all hopeless to find SOBO's nest. I stroll up to the granary at 1730, say hello, and I'm surprised to see a ♂ look out of the lower hole, then fly off. I manage to climb up ~~and~~ assisted by webbing (I don't recommend it! Very hard. Use rope ladder next time), peep in, and find 4 eggs! Yessiree. A nice little hole: Shallow and thin-walled. Should be easy to open.

May
2 April Checked the nest, + opened it up: 4 eggs still, nearing hatching. Hole was easy to open (very thin), but difficult to put back together for that same reason. I would guess hatching is on about 4 ~~May~~ ^{May} ~~April~~, and banding about 26 ~~April~~ ^{May}. 8 ~~April~~ ^{May} would be a good day to check for hatching.

Melanerpes formicivorusSOBO Nest Record

26 April Flush a bird out of the lower hole 4 eggs
in the granary: Peep in

2 May Opened hole, 1100: 4 eggs

nearing hatching (-2 days?)

eggs marked & measured

① 24.2 x 19.7

② 27.0 x 20.1

③ 26.3 x 19.7

④ 26.4 x 19.6

} all
hatched

14 May 1210, peeped in 4 babies

1 quite a bit smaller than the others

26 May 1200, Banded 4 healthy nestlings!

Juveniles # 736 - 739.

See capture record.

for weights + wing lengths.

Melanerpes formicivorusSOBO

14 May Nestcheck, 1210, using only the peeper because of the fragile nature of the opened hole: 4 babies, one of which was quite a bit smaller than the others.

9-10 days old seems like a pretty good guess, so I should plan on banding 4 (or 3) on 26 May

18 May A short nest watch here, more to find out who the hell is here rather than to get feeding data. Anyway, I do well. It looks like 4 birds are here, all banded! ♂639 yellow/DI Blue (not seen since June of last year), ♀640 Dbrn-Red (w)/m appear to be the resident breeders, with 2 ♀ helpers from last year's nest: ♀658 LBlue-Blk/LBlue, and ♀659 m/Blk-Or. The ♀NB of last year must certainly be gone, and as must ♂638 as well. Lots of feeding, so nestlings are probably doing quite well.

26 May Banded 4 healthy nestlings here today, now juveniles # 736 - 739.

14 June Said "hello" to the nest hole, but nobody looked out, meaning a 2nd nest isn't likely here at the moment

18 June ** GROUP UPDATE **

① ♂638 disappeared 14 Aug 1981 $\pm$ 2 months
Last seen 7 June 1981, probably gone by 22 Oct.

② ♀847 NB disappeared 14 Aug 1981 $\pm$ 2 months
(Same dates as for ♂638)

③ J657 NSAB 24 May 1981

**

18 May 1982

SOBO Nest watch

1420 - 1610 PST

1420.00 start

42 ♀640 (2) I

42 ♀659 (2) I

46 ♀? ⊖

48 ♀659 (2) I

58 ♀640 (2) I

59 ♀658 ⊖

1500 ♀?

01 ♂639 (2) I

01 ♀658

02 ♂?

02 ♀658 (2) I

03 ♂639 ⊖

04 ♀658 (2) I

05 ♀658 ⊖

05 ♀658 ⊖

10 ♀640 (3) I caterpillar

13 ♀659 (2) I orthop

14 ♀659 ⊖

46 ♂639 (2) I

50 ♀640 (2) A

51 ♀640 (2)

52 ♀640 (2)

53 ♀640 ⊖

56 ♂639 (3) ↑

56 ♀? ⊖

1605 ♂639 (3) ?

1610 end

Melanerpes formicivorusSOBO

27 June I stroll down here 1030, to check for the possibility of a second nest. Nobody in the granary hole, but I do see ♀658 ^{M / LBlue - Black} and Juv. 739 ^{LBlue - Yellow}, the "runt" of the brood here.

24 July
~~24 July~~

I'm fairly certain that I saw ♂639 ^{M / Dark LBlue / DPk} intruding at Hay Blom! First sighting of him in over a year. If he is no longer at SOBO, where is he and why would he be intruding on Haystack?

14 Dec Good watch here 1100-1230. I corroborate Alan's watch of 11 Dec: ♂639, ♀658, ♀659, ♂Juv 736, ♀Juv 739 all seen well & repeatedly, but ♀640 is missing. Presumed dead

Melanerpes formicivorusArnold I12 Jan

** GROUP UPDATE **

① ♀567 moved to Fanny Arnold 25 Sept 1981 ± 2 weeks

Definitely in at FA on 14 Oct 1981, but not there at 30 Aug.

27 Jan

Watching here, 1000. Things starting to make sense. ♀568, ♂679, ♀680, ♀505, ♂100 all seen well. Conspicuously absent is ♂566, who might very well be kaput. Seems like I should have seen him. It appears certain that Keep Out was just an AI extension. I saw ♀568, ♂679, ♀680 repeatedly, in the keep out area, as well as in the AI granary. All 3 appeared to even store live oak acorns in the AI granary as well. There appear to be 0 acorns in the keep out granary now, too. I also saw 2 Lambert birds (see Lambert notes) near keep out + Big Tree, along with all the AI birds. About 50m W of Keep Out, however, I saw all manner of unbanded birds hanging out. I don't know what's going on there. End off-rd watch 1400.

Sample of ~~10~~ 50 acorns taken from the easy access part of the granary

20 Feb

Counted stores here, 1200:

2175 TOTAL23 Feb1320, I find ♀567 ^{Red/Red} near Keep Out (see FIT notes)9 March

Watching near here, + keep Out. 1245 I find ♀567 ^{Red/Red} _{M/Red} eating acorns in the granary here, so I would have to say that she has returned home! Up by KO, I find ♂100, ♀568, & ♀505. Alar reports ♂679 along the fence line here, too and ♀680. ♂566 must be gone!

Melanerpes formicivorusArnold I10 March ** GROUP UPDATE **♂566 disappears 5 Jan 1982 ± 2 weeks

Last seen on 11 Dec 1981. Missing on 27 Jan

♀567 returns to A1 14 Feb ± 2 weeks

Last seen at FA on 27 Jan 1982, definitely booted
 out of there on 20 ^{Feb} ~~Jan~~ 1982, and comfortably
 back at A1 on 9 March.

9 April

Counted stores, 1330:

1650 Total

Several A1 birds seen up at KO, plus ♀680 ^{yellow}/_m seen
 in the A1 granary

28 April

After seeing birds in the traditional A1 nest hole the
 last two days, I opened it up today at 1730 + found
 4 eggs, 3 normal and one obvious runt! Unfortunately,
 I wasn't able to measure the runt. The hole had been
 slightly deepened since last year, and even after a good bit
 of sawing on the inside of the hole, I was able to just barely
 touch the eggs. I'm sure I'll be able to reach and remove
 banding age ~~Alreda~~ young. Also, if the runt is left in the
 hole after hatching, I might risk trying to salvage it
 then. I would guess that this nest is at the same
 stage as Black Oak: Hatching ~ 5 May, Banding
 maybe 27 or 28 May. Also, 8 May would be a
 good day to climb up to the hole to check for hatching.

11 May

Checked nest, 3 babies. 1 unhatched runt (see nest record)

29 May

Banded 3 nestlings, Juvs. 760-762: See capture records

7 June

Counted stores, 1630:

1460 Total.

I may have missed a branch on 9 April and undercounted by ~300

Melanerpes formicivorusArnold 1 Nest Record

26 April Bird looking out of traditional nest hole, 1900

27 April Bird flushed from hole 1830

28 April Climbed up + opened hole 1700:

couldn't remove eggs to measure.

Hole has been deepened

May 11 ~~April~~ Opened hole, 1630

young about 4 days

old

29 May Banded 3 nestlings, 1400, Now Juvs # 760-762

See capture records for weights + wing lengths

4 eggs

3 normal, one runt

(certain runt, though not measured)

3 babies,

1 ~~un~~unhatched runt

20.3 x 15.8, removed

Melanerpes formicivorusArnold 1

27 June J761 Corn-DBlue/Corn seen in passing here, plus many other birds not identified. Later ♀568' wht-mauve/M and ♂ ~~674~~ 679 Bk-LBlue/LBlue-Bk' in the trees up toward Keep Out.

Uh Oh, heading back to the truck, I hear a lot of woodpecker baby noises coming from the Valley Oak nearest the turnaround (30 m SE) at the Lambert gate. I investigate + find a very unlikely looking hole in a dead, very shabby limb on the NE side of the tree, about 5 m up. Fortunately, there is a live (but thin) limb next to it, and I climb up, peep in and find 2 (I think! 3 also possible) nestlings ~ 12-15 days old (no feathers on head to speak of, eyes barely opening, etc). I didn't open it, because this hole is incredibly fragile + shallow. It should only be opened once to band the nestlings, because it may require glue + putty to get back together. It will probably be impossible to drive nails into that limb. I should plan to band here on 4 July.

It took me a long time to determine that this is Al's nest. It is so close to Keep Out, my first suspicion was that it was KO's nest. After sitting watching the hole for ~ 2 hrs though, I finally saw a couple of birds fly up from Al to feed the nestlings. Anyway, this was a pretty close call. It would have been very easy to miss this nest, given time, location, etc.

*Melanerpes formicivorus*Arnold I

(27 June) A couple of interesting points: ① This nest certainly overlapped with the first nest (at least by a few days), which no doubt explains the unusual nest site choice. Other than the "traditional" nesthole, I would infer that this group has few (if any) viable ~~likes~~ alternatives that are in or close to the granary.

② I think it might be a good generalization that woodpeckers won't overlap nests unless they have a lot of helpers (as both BO + AI do this year). The helpers are needed to finish up the first nest while the adults get going on the second. Also, both AI & BO are still very well supplied with acorns. 1

5 July Banded two young here, 0800, after opening the nest (not as hard as I thought). The nestlings were extremely thin and poorly nourished. By feather growth, they were at least 20-21 days old, but they weighed only ~50 grams! Very poor. See capture record for details. Also, I was unable to get a blood sample from either of them, simply because I couldn't find ^{the} wing vein! They were just too small. Anyway, they were banded Juv. 826 + 827

I almost forgot: At the bottom of the nest was a rather smelly 15-18 day old nestling that had been dead for at least a few days. So there were certainly 3 nestlings at one point, and probably three when I peeped in on 27 June.

Melanerpes formicivorusArnold 1

17 July Here at 0700, I find a juvenile (not fledged, I'm certain) looking out of the nesthole. So the anemic young (at least 1, anyway) are still hanging tough.

17 Aug Counted stores, 1700: 110 TOTAL.

Getting low. A quick look at some birds uphill from the granary produces ♀568, ♀680, and J761 and J762 ^{Yellow-DBLue/or} DBLue-yellow/m, plus a juv NB(?) that was, fortunately, being chased. 1800, more birds:

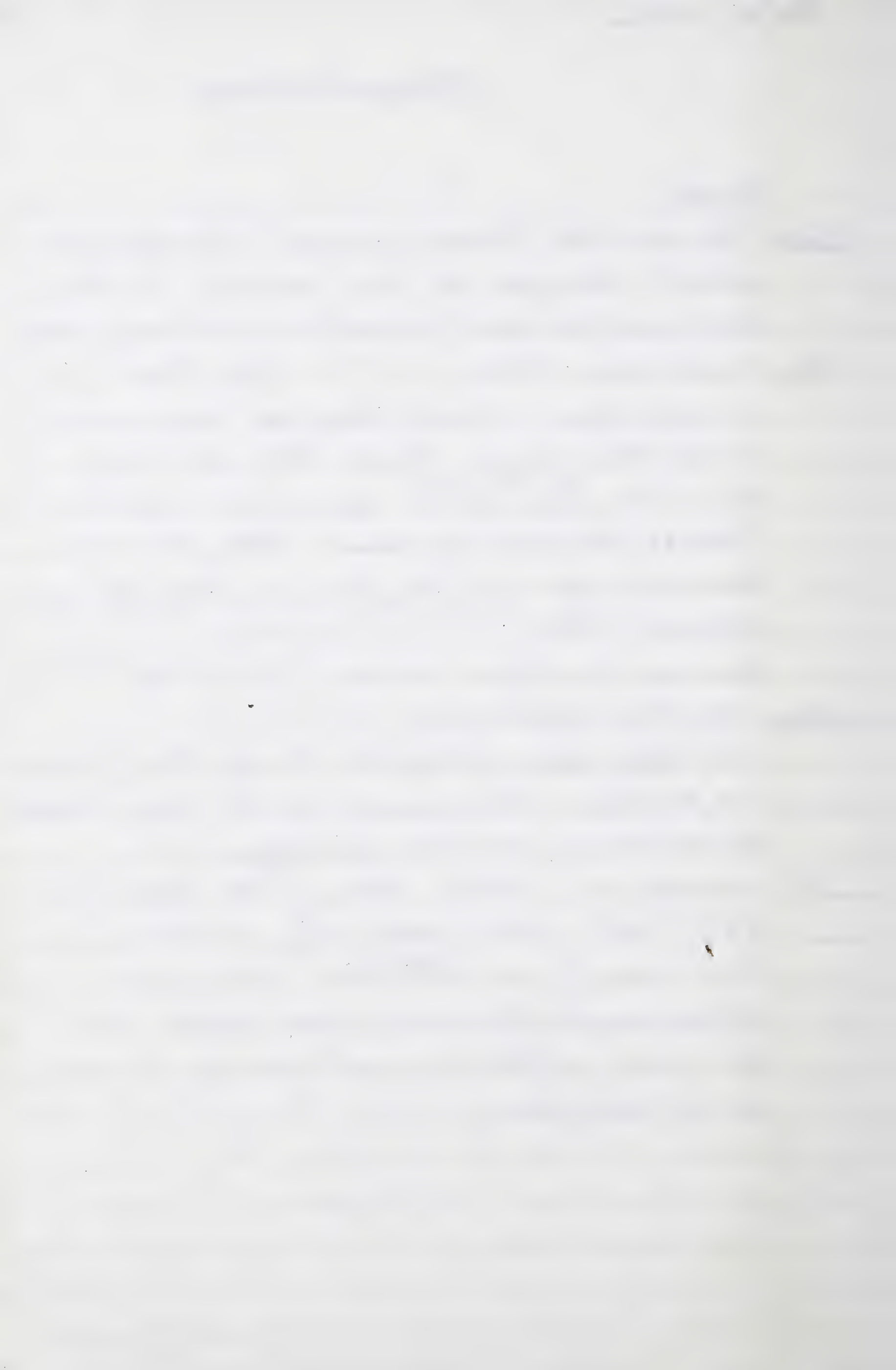
Both of the super runts from the second nest are still alive. J826 ^{m/DBLue-LPi-lr} and J827 ^{or f'DBrn-on}

sapsucking from a spindly blue oak. Plus ♀505 ^{whr/LPnkr}

24 Aug ** GROUP UPDATE **

① ♀567 moves to keep Out 20 June 1982 $\pm$ 2 months (see KO notes) ♀567 present at A1 9 March - 21 April. First seen for sure at KO on 19 + 23 Aug.

8 Oct Good watch here, 0930 - 1050. ♂100, ♀505, ♀568 ♂679, ♀680, J761 (molting to ♀, I'm fairly sure), J762 (a sure ♂) and J ~~826~~ 826 + J827, (both still too young for sexing: full juvenal plumage. Only bird missing is J760, who hasn't been seen since banding and is surely gone



Melanerpes formicivorusKeep Out

9 April The area around here continues to be a no-birds land (see previous KO, Lambert, A1, FA notes). Here at 1230, I see both the evicted FA ♂♂, 705 + 706 (M/Red-wht + wht-mauve/M of A1, M/Lgrn-Dgrn, respectively), ♀568 a ♂NB (FA? elsewhere?), and ♂100 Yellow-Dgrn/Yellow-Dgrn. Quite a mess. All this is going on in the area SW of the Keep Out granary.

8 May A quick look, 1500, I find 2 ♂♂ in and around the Keep Out granary. One is ♂706 Red/Lgrn-Dgrn M/Lgrn-Dgrn, and I would guess that ♂705 was the other. They almost look established here, other than the fact that they seem to lack both a consp. & a ♀. What's more, I see one of the ♂♂ fly off toward the trees around Big Tree. Good! 1520, Correction! It was a ♀NB that flew from the ~~Big~~ KO granary to Big Tree. This might be a real group!

3 June A casual look here, ~~10~~ 1430, I can't find any birds around.

27 June A quick look 0645, Right off I find ♂705 DBlue/Red-wht in the trees 30m SW of the Keep Out granary. Plus, I heard wakas when he flew further back. I suspect that Keep Out is legitimate!

19 Aug A tough watch here, 1700-1830. Hanging around Keep Out are still both ♂705 M/Red-wht and ♂706 M/Lgrn-Dgrn. However, they are still only "near-KO" in the trees 40m SW of the KO granary. But with them I'm sure was a third bird, with which they wakad several times. Walking back, I got a brief glimpse of a bird? M/Red: ♀567? Not sure, but would make sense.

Melanerpes formicivorusKeep Out

23 Aug I try one more brief watch here, 1800. Success!
 In the ^{large} Blue Oak sap tree 30 m SW of the KO
 granary, and in some adjacent Valley Oaks, I find
 ♀567 ^{Red / Red} M / Red, sitting calmly & comfortably next
 to ♂705 M / ! Great! KO looks for real!
 I assume ♂706 is around, too. What's more, at
 1830 I try to flush ♀567 toward A1, and though
 she flew initially across the fence to one of the large
 VO's on Hastings, she immediately flew back
 to Keep Out when I tried to flush her further.
 Acorn storage will tell us for sure, but I'm nearly
 100% ^{sure} KO is occupied!

24 Aug ** GROUP UPDATE **

① ♂705 + ♂706 founded (as 1st year) Keep Out
 All three of the Fanny Arnold residents (♀567, ♂705, 706)
 were seen at KO on 23 Feb, after having been booted
 off by the invading NB birds. On 9 March, ♀567
 was seen both at KO & ^{A1} ~~AI~~, but ♂100 (of A1) was also
 at KO, suggesting it was still "up for grabs" Still a
 free-for-all on 9 April, but seemed to be settling
 down to a legitimate operation on 8 May. Thus,
 I would say KO was founded March 22 1982 ± 1 month

② ♀567 moved to KO 20 June ± 2 months

First seen at KO on 23 Feb + 9 Mar, but back at A1 ^{9 Mar}
^{20 Mar,} 9 April, 18 April, 21 April, Missing from A1 on
27 June, 17 Aug. For sure at KO 19, 23 Aug.

Melanerpes formicivorusKeep Out8 Oct

Keep out is definitely in business! Lots of green acorns stored here already, and I see ♂706^{Red/Lbrn-DBrn}
 ♀567^{Red/Red} m/Red was conspicuous here yesterday, plus a third bird, which I presume is ♂705.

0800, ♀567 seen again, defending the granary. No doubt!

0905, Co-fim ♂705 DBlue/Red-white. All here

7 Dec

Walked by 0945, flushing 3 birds. A reasonable number of acorns (~400) stored here.

1130, walking by again I get ♀567^{Red/Red} and ♂705 DBlue/Red-wht but ♂706 maybe missing.

1215, Nope, ♂706^{Red/Lbrn-DBrn} m here, too.

Complete census.

Melanerpes formicivorusLambert12 Jan** GROUP UPDATE **

① ♂284, ♂582, ♀848 all disappeared 1 July 1981 ± 2 mon.
 Last seen late April - early May. Gone by October.

② ♂583 disappeared 1 Nov 1981 ± 2 weeks
 Last seen on 14 Oct 1981, gone by 10 + 20 Nov.

③ ♂545 founds as adult 8/11/01 ± 1 week

♂624 " " " " "

♂691 " " juv " "

All 3 were at Black Oak 22 Oct 1981, first seen at Lambert 10 November

④ ♀652 founds Lambert as adult 8/11/01 ± 1 week

First seen at Lambert 10 Nov, intruding at UA2 on 14 Oct

27 Jan

1110 watching, I finally do OK here. ♂624 L Blue-Red / L Blue-Red
 ♂545 L Blue / Metal ♀652 Yellow / Lorn all seen in the
 Lambert area. ♂691 D Blue-Yellow (N) / Lorn and ♂624 were
 seen in the keep out area earlier, about 1030.

1200, ♂691 finally seen in the Lambert area, so a complete census up here. But... A 5th bird is around, whose left leg bands I read as ♂ B Pink / Metal, absolutely unresolvable with any other Black Oak birds. Could it be the old Lambert ♂ ~~583~~ 583? Will have to check. Seems friendly (or at least not aggressive) with the other birds, although I have seen some chases up here. Will I ever figure out what's going on up here?

Sample of 50 acorns taken from the down limb, + replaced with an equivalent number.

Melanerpes formicivorusLambert

20 Feb Big doings here! 0830, a POWER STRUGGLE!

Here's the situation:

① ♀652 is being seriously challenged by a group of 3 (I'm pretty sure) unbanded ♀♀, and ♀652 ^{Yellow / Lbrn} ^{Yellow / M} is losing! The 3 ♀♀ are looking very friendly with the ♂♂, and seem to have full control of the fence-line trees. 2 of the ♀♀ seem to lack tail spots, while the 3rd is heavily tail spotted and has a broken retrix.

♀652 is limited to the broken top Valley Oak and the fallen limb, and although this is where most of the acorns are, she seems to be losing out.

② The 3 Lambert ♂♂ are here: ♂♂ ~~545~~ 545 and 624 are especially conspicuous, ♂691 seen briefly. But also here are other Black Oak helper ♂♂: ♂497 ^{M / Blk-Red} Red / " " , ♂546 ^{Lbrn / DBLue} Lbrn-DBL / M (especially prevalent doing a lot of chasing it seems) and ♂689 ^{M / Or} Or / white.

③ About 4 additional ♀ NB hanging-around as well: TOTAL PARTICIPANTS = 15 or so. No other strange banded ♂♂, but I got a glimpse of somebody I thought might have been BPr / M (♂583), so I should keep looking.

④ The usual amount of waiting, garricking, etc. ♂♂ still showing a fair amount of aggression toward the ♀♀. Even saw ♂689 peck ♀652!

0950, ♂713 ^{wht-yellow / M} Yellow / Blk or of Black also here, but very peripheral

1030, ♀652 seems to be shifting a bit to the 2nd fence tree

Melanerpes formicivorusLambert

(20 Feb)

1045, Alan watching, I count stores:

Fallen limb HNHR 2650Broken Valley Oak 325→ Fallen Limb, Lambert ~ 550Feline area 1503675

TOTAL

Big surprise was the fallen limb on the Lambert side had a shitload (~550) acorns. Only remember a couple there before

1110, Alan reports 2 ♀NB with tail spots. ~~Also~~
Also, he thinks there may have 4 cooperating ♀♀ here, will definitely bear further watching.

1120, A bit more, perhaps just 3 ♀NB here, as I originally suspected. 2 may indeed have tail spots. But it looks like ♀652 is definitely losing. By now, the 3 ♀NB are looking tight with the ♂♂, and have taken over both the broken top tree and the fallen HNHR limb. ♀652 is not to be seen.

23 Feb

Alan watched here this morning, and reports 3 ♀NB looking in control of the situation, and ♂♂545 and 624! ♂691 not around, and ♀652 nowhere to be seen.

26 Feb

While watching at Bianco ¹⁷⁰⁰, I hear a bit of exaggerated wakas coming from here on occasion.

9 March

Alan watches here, reports 3 ♀NBs, ♂546 and ♂689 (from Black Oak) but no other Lambert ♂♂. (?)

We go back up to Lambert, Alan sits while I

Melanerpes formicivorusLambert

(9 March) wander around looking for birds. I get the same results he had: 2 or ~~3~~ 3 ♀NB, ♂546 ^{L6m/DBlue} L6m-DBlue m and ♂689 ^{m/orange} or /unt. Where have all the other ♂♂ gone? It makes no sense that they would have gone back to Black Oak. Have they moved elsewhere with ♀652? Or have they all been nailed by something (perhaps together at a roost hole)? Doesn't make a lot of sense, I'll have to admit.

For added confusion, I saw ♂689 peck at one of the ♀NB, rather hard. So we may not have 3 ♀♀ here, come April. Also, wandering around NW of the Lambert granary I come across Bar-B-Q, first time I'd ever seen that granary. It had acorns and, what's more, I believe I saw one of the Lambert birds fly there and get an acorn. Could it be a Lambert adjunct? If so, that screws up my acorn counts.

As always, more questions than answers about the Arnold. Will have to try, try again.

* 10 March GROUP UPDATE * * * * (Leaving ♂♂624, 691, 545 for now)
 ♀652 ~~is~~ forced to leave group 820222 ± 1 day
 Seen losing the power-struggle there on 20 Feb, gone by 23 Feb.
 ♀♀860, 861, 862 immigrate to Lambert 22 Feb 1982 ± 1 day
 3 cooperating ♀♀ seen winning the power-struggle 20 Feb. In complete control by 820223
 ♂♂546, 689 move to Lambert ~~820223~~ 1 March 1982 ± 1 week
 Seen participating in PS 20 Feb, not seen there 23 Feb, but comfortably in by 9 March.

Melanerpes formicivorusLambert9 April

Counted stores, 1200:

Fallen Limb 1275Broken Valley Oak 425Fence area 651765

TOTAL

Also, there are no stored acorns on the fallen tree on the Lambert side of the fence. Most were eaten out of the shell. Perhaps rodents ate most of them?

Windy, birds keeping a very low profile. I saw three birds flush from the 1st fence tree at one point, but the only one I saw well was ♂545 ^{LB/blue/m}. I saw a ♀NB near keep out, that could have been Lambert.

21 April

A quick look here, I see ♂546 ^{LB-blue/m}, ♂624 ^{LB-blue-Red/LB-blue-Red}, and a heavily tail-spotted ♀.

Between this watch, and Alan's watch here 18 April and my watch ~~here~~ at Black Oak 18 April, I think it's pretty clear that 3 males are here:

♂545, ♂546, ♂624; The other 2 ♂♂, 691 + 689, have returned to Black Oak by 18 April.

No action in any holes here.

30 April

Successful Ambush here: I catch 4 birds roosting in the old E-facing hole in the second fence line tree: 2 heavily tailspotted ♀♀ (now ♀719 + ♀720) and ♂624 + ♂546. ♂546, the devil, did not come out until 0800 (0900). I also had the impression that, (after letting the birds go), there may well be 6 birds around, meaning the third ♀ might still be here.

Melanerpes formicivorusLambert

4 May Alan watches here today + reports 3 ♀♀, 1 ♀NB and ♀♀ 719 + 720! So we do have 3 ♀♀!

5 May Uh oh. walking up here 1645, I am surprised to find a ♂ woodpecker looking out of a N-facing hole in the "holey" (more southerly) fence-line tree. I climb up, open the hole, and am chagrined to find only 6 eggs! Not good evidence for 3 laying ♀♀, I must admit. In fact one of the eggs was useless -- a puncture hole about 3mm wide at the "sharp end", and all liquid drained out. I removed this egg, but left the other 5. The eggs were all quite opaque, and I guessed ~ day 8 in the incubation sequence, but I suppose they could be as early as day 5, or as late as day 10. Some points:

① If they are ~ 5 or 6, my ambush on 30 April could have really screwed up the two ♀♀ I caught. Certainly it ~~did~~ didn't look like those two ♀♀ were in the process of laying eggs. I didn't feel any eggs inside them. I will have to find out for certain when these eggs hatch.

② Could only one ♀ (♀NB) contributed to this clutch? I must be alert for the possibility of other nests on the territory.

8 May Checked hole, 1400. Still 5 warm eggs, and it doesn't look like they are going to hatch immediately. So I very well could have screwed things up here with my ambush.

11 May Walked by, 1800. Flushed ♂ from hole, and I hear noisy babies! Good! This means hatching was probably 10 May

Melanerpes formicivorusLambert Nest Record

5 May Find ♂ looking out of ~~the~~ new hole in the holey Fenceline tree, 1700. Opened hole: 6 eggs
eggs about 8 days $\pm$ 2 days.

One egg badly damaged, hole in sharp end, all liquid drained. That egg removed, leaving 5, which seemed OK.

8 May Opened hole, 1400 5 eggs

marked + measured

① 23.9 x 18.7

② 24.7 x 18.3

③ 24.0 x 19.1

④ 24.3 x 18.5

⑤ 23.5 x 19.0

removed 6th egg 23.4 x 19.3

11 May Eggs have hatched!

22 May Opened hole, 1300: 3 nestlings
eyes beginning to open, ~12 days: No sign of
other eggs or young.

31 May Banded 3 fine nestlings, now Juvs 775 - 777.
(see capture records)

Melanerpes formicivorusLambert

(11 May) which means I probably didn't screw up the egg-laying by my ambush, since the clutch was probably complete about the 29th.

18 May Alan watched here 1½ hr, saw only ♂545 feed

22 May Checked the hole, 1300: 3 nice 12-13 day old nestlings. I also looked at other holes, in the remote chance that there may be another nest here, too, but found nobody looking out of holes.

31 May 1230, Banded + bled 3 Nestlings
(see capture records), now Juvs. #775-777

7 June Counted stores, 1600:

Fallen limbs	675
Broken Top Valley Oak	50
Ferrel line area	10
	<u>735</u> TOTAL

14 June 1700, I walk up here to look for a possible second nest. Flushed several birds, and I think I heard a fledged juvenile among them. But no sign of a second nest

18 June ** GROUP UPDATE **

① ♂689 + ♂691 returned to Black Oak 20 March 1982
± 2 weeks (see Black Oak notes)

27 June A quick look here 0715, very quiet. Only ♂545 seen, and no sign of a second nest. Still some acorns around.

17 Aug Counted stores, 1645. 0 Total!
These birds ran out in a hurry.

Melanerpes formicivorusLambert

9 Sept Tried a double ambush here, but the only bird we got was ♀ 720

7 Dec Finally, a good watch at Lambert, 09⁰⁰ - 1130.
 I find ♂ 546 Lbrn / DBLue
 ♀ 720 M / Red-yellow / Red
 and J ♂ 777 BIK / Lght-Lbrn
 ♂ 624 LBlue-Red / LBlue-Red
 J ♀ 775 M / DPnk
 All were seen

well and repeatedly (at least 5X each), leading me to conclude that ♂ 545, ♀ 719, ♀ 862(NB) and J 776 have all disappeared.

Lots of activity. The group was bothered throughout the watch by a ground squirrel that seemed to be gathering acorns from the fallen limb and carrying them to the north fescue tree (a hollow limb therein) and caching them. The woodpeckers mobbed it continuously, but I saw the squirrel make at least 5 such trips.

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Melanerpes formicivorus

Fanny Arnold

12 Jan

** GROUP UPDATE **

① ♂651 disappeared 21 Sept 1981 $\pm$ 2 weeks

Last seen FA 30 Aug 1981. Gone by 14 Oct

② ♀652 left group 21 Sept 1981 $\pm$ 2 weeks

Last seen at FA 30 Aug 1981. Absent + intruding at UA2 on 14 Oct.

③ ♀567 moves ~~ad~~ as adult 25 Sept 1981 $\pm$ 2 weeks

~~First~~ First noted at FA on 14 October 1981

20 Feb

A real mess here. Alan watches from 1200-1300, and sees just 1 ♀IVB. I sneak a look here, 1430, and find 4-5 unbanded birds! at least 2 (probably 3) ♂NB and one or 2 ♀NB. Don't have the foggiest as to what the haps is here. I can't believe all these birds plan on staying. Still acorns here, and Alan saw a ♀NB store an acorn! Some could be spillover from the Lambert ~~power~~ power struggle, but everyone seems friendly to each other. 1510, well. A big dominance interaction (lots of pecking, chatters) between 2 ♂IVB in the granary. I will have to come back. End 1515

-3 Feb

Things starting to make sense here. I flush or see 5 birds when I walk by at 1315. Then, in the trees just south and west of Keep Out, I find ♀567 ^{Red/Red} M/Red, and (more importantly, ♂705 DBue/Red-wh. Certainly supports the notion that the FA residents were indeed booted out! 1340, confirm ♂706 ^{Red/Ln-DBn} M/Ln-DBn. So all 3

FA originals are up here near Keep Out

9 March

Watching at the edge of Keep Out - Fanny Arnold, keeping

Melanerpes formicivorusFanny Arnold

(9 March) an eye on both places. At FA, I see at least 4 birds.
 2♂♂, 2♀♀, all apparently unbanded. Near keep out
 its a mess. I do find ♀567 ^{Red/Red} M/Red and ♂705 ^{M/Red-whit}

in the trees about 50 m SW of the KO granary, but I also
 find shitloads of unbanded birds as well, and ♂100 yellow-Dory/yellow
 DGreen. All seemed to be sapsucking (or interested in sapsucking)
 from a Valley Oak in that area. (Sapsucker + Nuttall's
 woodpecker also sapsucking there). Anyway, it doesn't look like
 the FA birds have certainly moved into keep out.

1300, now ♀567 back at the AI granary. See AI notes
 Also, alan watches here, he sees a certain 2♀♀ and
 3 (probably) ♂♂. So still a 5-bird group here.

10 March ** GROUP UPDATE **

♂705, ♂706, ♀567 forced to leave group on ~~11 March~~
 8 Feb 1982 ± 1 week. ♀567 and 2♂♂ (presumably
 705+706) were last seen there 27 Jan. Appeared to
 have been gone for some time by 20 Feb.

♂♂ 863, 864, 865, ♀♀ 866, 867 move to Fanny
 Arnold 8 Feb 1982 ± 1 week. Almost certainly forced
 the residents to leave

21 April A pass by, 1130. At least 3 birds still around, but
 these guys are decidedly marginal as far as stored acorns go.
 I would say that they are effectively OUT! One bird here
 is a ♀NB. A serot ♀ in the granary is chased out after a minute,
 by 2 birds.

5 May A quick look, 1800. 2 ♀NB seen, and a suggestion
 of a 3rd bird. Definitely out of acorns, well, very few ^{anyway}

Melanerpes formicivorusFanny Arnold

11 May On 8. May I saw a ♀ looking out of a high, N-facing hole in the combination roost tree - partial granary Valley Oak near the fence line. Today at 1500 I struggle up to the hole, open it, and find 4 eggs, far along in incubation (~8-10 days), one of which even appeared slightly pipped. At any rate, 4 eggs is a pretty miserable clutch for a group where I expected 2 ♀♀ to nest. 2 points:

① One egg was a runt (see NR for details), so perhaps it was 2 ♀♀.

② Since this group of UB birds all moved in together perhaps it was a family that had lost its granary and opted to take over F/A. If this is true, one of the 2 ♀ UB could be a helper. This is not at all unlikely. But we certainly won't learn anything more until I get these devils banded.

22 May Strolling by at 1340, the nest seems to be active still. Saw a ♀ NB feed + fly at the nest, then go to a Valley Oak to sapsuck. The birds here may nest successfully in spite of the lack of acorns.

3 June Banded 2 extremely healthy nestlings here, now juvs. ~~796~~ #796 + 797, despite the fact that Fanny Arnold is totally out of acorns.

12 June A baby looking out of the nest hole, 1330

27 June A brief look here 0900: Both Juvs 796 ^{DBlue-Yel/LBlue-Yellow} and 797 ^{white/DBlue-Red} alive + well here, being fed by 2 ♀ NB and a ♂ NB.

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Melanerpes formicivorus

Fanny Arnold Nest Record

8 May ♀ looking out of high hole (facing N) in Roost tree
(Valley Oak) - partial granary.

11 May Opened hole, 1500

4 eggs

~day 8-10, one appeared

① 26.7 x 19.2

pipped slightly

② 27.2 x 18.6

③ 26.3 x 19.1

④ 20.2 x 15.5 (Runt!)

3 June Banded 2 fatt+sassy nestlings here, now Juvs. # 796 +
797. Scenotes + capture records

12 June A baby looking out of the hole here

Melanerpes formicivorusFanny Arnold16-17 July

Failed ambush attempt here at the old ambush hole. Nobody roosted, even though 3 were flushed from the hole on the night of 14 July.

26 July

walking by @ 1635, & see both J796 + J797 up around the Al Golden Oak.

19 Aug

Good watch here, 1630-1830. Quite sure that this group now contains 2 ♀ NB, 1 ♂ NB, and the two juveniles, J796 + J797. All 3 of the adults were seen simultaneously at least two times. The two adult ♀♀ were especially conspicuous, sapsucking from a spindly Valley Oak at the head of the FA draw.

23 Aug

** GROUP UPDATE **

① ~~March~~ Two ♂ NB (♂864, 865) disappeared
~ ²⁰ March ± 2 weeks

Three ♂ NB here for sure 23 Feb, 2 ♂ only on 9 March, 1 ♂ on 9 April, and no evidence of more than 1 ♂ on 21 April, 5 May, 11 May.

6 Sept

Successful ambush here, catching a ♀ NB and a ♂ NB (and Juv 797, probably in ♂ plumage). The new birds are ♀834 and ♂835.

7 Dec

Walk by, 1215, I see ♀834 ^{wht-BLK/M} and ^{288 294 or} four other birds (~~288 294 or~~), so it looks like FA still has 5 birds. 1300, confirm ♀867 NB and J ♀796 ^{DBLue-Yel/LBlue-Yellow} M / On 8 Oct Alan saw ♂835 + ♂ Juv 797.

Melanerpes formicivorusUpper Arnold 212 Jan

** GROUP UPDATE **

① J682, J683, not seen after banding.

② ♀621 disappeared about ^{30 Sept} ~~March~~ 1981 $\pm$ 2 weeks③ ♀591 " " 1 Sept 1981 $\pm$ 1 month

♀621 last seen on 13 Sept, gone for sure on 14 Oct

♀591 last seen on 17 July, gone for sure on 14 Oct

♀591's disappearance could have been precipitated by the death of ~~♀621~~ 621, but we don't know.④ ♀632 moves as adult to UA2 1 Oct 1981 $\pm$ 2 weeks

Not here on 13 Sept, but present and aggressive on 14 Oct. originated from Lambert.

27 Jan

Walking by, 1500, a large limb from the 2^o granary has fallen: Will have to get a hole count next time I come up. Some of it is still usable. I took a sample of 50 acorns from the fallen limb. Also, I got a glimpse of a ♀, Metal/? (all I saw), which would certainly suggest that ♀632 is still here

20 Feb

Counting stores, 1400. It looks like this limb

loss was ~ 600 storage holes, with ²⁵⁰ ~~1400~~ still usable.Total loss was thus 350 holes

"2"	granary	<u>1175</u>
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"1"	granary	<u>1075</u>
-----	---------	-------------

2250

TOTAL

Also managed to hallucinate a complete census, birds seen across S Ravine and at a great distance. ♂123 D Blue / Metal, ♂590 M / Dorn-Lbm.
 ♂681 Yellow/M ♀632 Red-wnt / Red-wh? M

Upper Arnold 2

14 June A quick pass 1730: Saw a recently fledged juvenile looking out of one of the holes in the 4-hole stub below the two granary trees. I should check that again, but otherwise no evidence of a second nest

The other, 729, is probably around as well. No sign of a second nest, and no good looks at any adults.

17 Aug	Counted stores, 1830	"2°" granary	<u>140</u>
		"1°" granary	<u>60</u>
			<u>200 TOTAL</u>

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Melanerpes formicivorus

Upper Arnold 2 Nest Record

2 May

A ♂ Looking out of the upper hole
in the Blue Oak nest tree, 1000:

5 eggs
~ ⁵⁻⁶ days old

1215, Hole opened, eggs marked

+ measured

① 26.4 x 20.1

② 25.4 x 19.3

③ 25.3 x 19.9

④ 26.4 x 20.3

⑤ 26.0 x 20.0

14 May

Checked hole 1420:

4 nestlings

20-25g (~6 days) no sign of 5th egg or young

31 May

1330, Ba-ded + bled

4 nestlings

Now Juvs # 778 - 781 (see capture records)

Melanerpes formicivorusUpper Arnold 29 April Counted stores, 1500 hrs:"2" granary 1050"1" granary 11002150

TOTAL

While counted, ♂ 681 or / yellow showed up, chasing a rather persistent Nuthatch, and then, in the big VO E of the main granary area, I saw 2 ♀, at least one of which was unbanded. Not what I wanted to see, given all the unbanded birds up here. Not absolutely sure if the ♀ really belonged here. Unfortunately, it started to rain, so I couldn't hang around.

2 May Walking up here at 1000 with Alan, we find a ♂ looking out of the upper opened hole in the Blue Oak nest tree. Climbing up later at 1215, I find 5 eggs about ⁵⁻⁶ days old, perhaps. I would guess hatching may occur about 9 May, and barring improved information around that date, banding around 31 May. Also, the facts that ① Clutch is small ② Nest is relatively early ③ Eggs are nearly all the same size ~~all~~ All indicate that there are probably not two new FNB here, but we will have to watch the nest some to find out for sure.

14 May Checked nest; 1420: 4 nice-looking nestlings, with no sign of a 5th egg: Young about 5-6 days old.

31 May Banded + bled 4 nestlings, Juv # 778-781. See nest + capture records.

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Melanerpes formicivorus

Lower Arnold 2

23 Feb Counted stores here, 1230: As usual, they were spread all over the place, but I counted 620 total. Also, saw ♀637 ^{LPink/BK} as I walked up. Also, ♂611 DBLue-whr/LGrn-whr, chasing a nuthatch

9 April Counted stores, 1400. 325 TOTAL

Nobody in any holes, no birds period.

26 April A nest in the back hole here: 3 eggs!

2 May Opened up the back hole here to find 5 eggs, marked + measured: See nest record for details. This means that the clutch was probably completed on 28 April, so we could expect hatching by 9 May and banding by 31 May

14 May Opened hole (see nest record): 3 nestlings (one quite a bit smaller than the other two) ~ 5-6 days old. Certainly 2 of these should fledge. Also, 2 unhatched eggs were present. One was infertile, rotten liquid center (I know, because I broke it accidentally. Yecch!), and one contained a fairly well developed embryo.

31 May Banded & bled 3 healthy nestlings See Nest record & capture records. Now Juvs # 782-784.

7 June Counted stores, 1700: 225
Also, a baby looking out of the nest hole here.

14 June Breezed by here, 1730: No sign of a 2nd nest

18 June ** GROUP UPDATE **

① ♀697 disappeared 25 Dec 1982 ± 2 months
Last seen 2 Nov 1981, missing on 20 Feb

1982 R.L. Mumme

Melanerpes formicivorus

Lower Arnold 2 Nest Record

26 April

Flush a bird from the back hole

3 eggs

1800 hrs. Peeped in.

2 May

Opened hole after flushing ♀ from

5 eggs

nest: 1200, Eggs measured

① 27.0 x 20.3

② 27.0 x 20.6

③ 26.3 x 19.5

④ 27.1 x 19.7

⑤ 26.6 x 20.3

14 May

Opened hole, 1330

3 nestlings

2 un-hatched eggs:

1 infertile

1 developed embryo.

(→ 783)

(→ 784)

(→ 785)

① Blk-Red

② LBlue-Orange

③ NB

29.5 g

25.8 g

13.8 g

31 May

weight 83.0 g

86.5 g

72.0 g

1430

wing 86

85

70

crown seg

1

2

3

Banded all 3 nestlings (+ bled)

1982

R. C. Mumme

2

Melanerpes formicivorusLower Arnold 227 June

Here at 1100: No sign of a second nest, but
 Lbrn / Yellow-Lbrn
 an adult ♂ and J782 Seen here.

26 July

Not a bad watch here, 1700-1900. All 3 Juveniles
 782 Lbrn / M, 783 M / LBlue-or, 784 Dbrn / DBlue-Yel(M)
 plus ♀637 ^{LPink / Blk} M / Black. The big news is that
 the long lost ♀697 ^{Black-Yellow / M} was here, too!

Not seen since last November. I don't know if she's
 been here all along or has just returned, or is just
 visiting. Saw her only once, briefly, but clearly.
 At least 1 adult ♂ (probably ♂611 ^M, but not
 sure) here as well.

17 Aug

Counted stores, 1830.

Main granary 45Elsewhere 045 TOTAL.23 Aug

** GROUP UPDATE **

① Reinstate ♀697. She did not disappear ~ 25 Dec
 1981 Still Present at LA2 on 26 July 1982

It is quite possible that she left temporarily during
 spring before returning, but our watches here were
 so poor it is better to say she was probably here all along.

11 Dec

Watching here, 0900-1030, F find ♂611, ♀637, ♀697,
 ♂698 (not seen since April) and J♂782 ad J♀783.
 Only J784 (probably gone) not seen.

Melanerpes formicivorusBianca

27 Jan walk by, 1600, it looks like hard times ahead for these birds. Only 40 acorns in the knoll tree. I did see a bird here briefly, I believe a ♀ NB, so somebody is probably still around. Perhaps not for long, though. Down at main area, a limb with about 60 acorns has fallen. Allen + I prop it up, so maybe 50 are still usable, plus 10 others still in a branch. Make it 100 acorns total here.

Oops, a couple of other scrawny Black Oak branches have a fair # of acorns. Maybe 200 more or so, so 300 total. Doing better than I thought.

26 Feb watching here, 1700. Maybe down to a pair here. I see a ♂ + ♀, both UB, near the S edge of the copse separating BO + Bianca. ♀ NB ate buds for me, too. So far, no evidence of other birds around, so perhaps the other 2 birds I saw here in the fall have split. Certainly a pair makes more sense here, given the poor granary + acorn situation.

1715, Whoops, I jumpeth the gun. A second ♀ around, also UB. So at least 3 birds still here. These guys are still in contention for a 2-♀ communal nest.

Not at all inconceivable that 4th bird around as well.

9 March A quick peek at 1015, again 1 ♂, 2 ♀♀, all NB. Maybe a threesome here. When I first walked up, I saw what I thought was a 4th bird, but it appeared to be in the process of being mildly chased by the other 3.

10 March ** GROUP UPDATE ** ♂♂ 868 869, ♀♀ 870, 871 found Bianca (age unknown) 1 Nov 1981^{+1 month} First noted, w/ stored acorn, 3 Dec 1981.

1982

R.L. Mumme

2

Melanerpes formicivorusBianca

21 April A hole check, 1300. Nobody in any holes, but at least two birds still around here. Still a few acorns remaining down in the Black Oak.

2 May I walk past here, 1145, and flush a bird out of the low broken-stub hole in the Blue Oak near the main area here. Back at 1300, I climb up, peep in, and find 8 eggs, including 1 conspicuous rant! Ah, Bianca lives, with 2 laying ♀♀ (for sure)! Plenty of acorns still here. Will have to open this soon.

4 May Banded the birds here wouldn't hurt, either. Opened the hole here, 1000. Mystery. Only 6 eggs here now, and the rant is gone. What's more, nobody was incubating when I arrived. Has this nest failed? Will have to check later. Otherwise, these eggs opaque, appear to be about day 8 in development. Tentatively expect hatching 8 May, and banding 30 May

14 May No, the nest hasn't failed. 1300, I climb up and find 4 babies, the largest of which weighed 25g, so ~~that~~ 6-8 days old is a pretty good guess, and I will push the banding date up to 29 May

29 May As promised, I band 4 healthy nestlings (now juvs. 763-766) See capture records.

27 June A check here at 0915. An adult ♂, a juvie, and a sex unknown adult seen as I walk up. No sign of 2nd nest activity. Also, a ♀ NB seen and juv. 763 ^{M/Black}. In fact, I got the impression that only 3 birds (2 adults) are still here

1982 R.L. Mumme

Melanerpes formicivorus

Bianca Nest Record

2 May Flush bird from broken-dead stub hole low in Blue Oak in the main Bianca area.

Back at 1300, Peeping in

8 eggs

(1 certain runt, 7 appeared normal)

4 May

Opened hole (tough) 1000

6 eggs (P.P.)

runt missing. Eggs opaque, maybe day 8

Nobody incubating when I arrived. Nest abandoned?

8 May

♀ in hole, ~~1600~~ 1600.

14 May

Checked hole, 1300, 4 babies, 6-8 days, no unhatched eggs

29 May

Banded + bled 4 nestlings, now Juvs # 763-766.

See capture records for details

Melanerpes formicivorusBianca

18 Aug Tried to watch here 1700 - 1830, but very confusing. For sure I saw 2 ♀ NB and 1 ♂ NB, and I think all three of them belonged to each other. I saw no Bianca babies however, and it seems quite likely that all are gone. However, I also saw a Juv NB that seemed to be molting into ♀ plumage (where did she come from) that wasn't really being chased around by what I perceived to be the ~~new~~ residents. All these birds were hanging around both sides of Bianca ravine, near the "head". To make matters more confusing, Black Oak birds were getting mixed up with everybody, too.

23 Aug ** GROUP UPDATE **

① One ♂ NB (♂ 869) disappeared ~ 20 Jan - 16 weeks
Present at Bianca 3 Dec, missing 9 March.

4 Oct Very strange happenings here, 3-4 Oct. At 0730 on 3 Oct, while Bill (Armen) + I were doing the Acorn count, I heard a woodpecker tapping from inside a hole in the Bianca VO "nest" tree (from years ago). We determined that ~~was~~ the bird was in an old opened hole, that seemed to be blocked from inside by a piece of wood. I returned at 1730, just before dark, climbed the tree, and found the hole completely blocked (from inside) by a piece of wood. I pushed the piece into the hole and looked in with the flex light, and immediately saw a ♂ Acorn Woodpecker looking at me. I tried to see him out, but it got quite dark, so I put a couple of nails over the hole

Melanerpes formicivorusBianca

(4 Oct) to block it until morning, I returned at 0630 on 4 Oct to find that the ♂ (presumably) had escaped. He actually succeeded in prying off one of the nails, either late yesterday evening or this morning before I arrived. I climbed up, opened the hole, and found a dead 70g ♀ NB, who had no doubt starved to death in the blocked hole. She had been dead at least 24 hrs, so I'm certain she was dead the night of 3 Oct. How long the birds had been trapped there, I don't know. The ♂ certainly had the strength to get out, but I have to wonder how healthy he is.

The big question is, of course, how the hell did the two birds get trapped inside? My guess is that the piece of wood from the cut came loose (or was worked loose) and in trying to shove it out of the hole, the birds jammed it in and trapped themselves. Pretty dumb, but since the piece that trapped them was from the cut, I'd have to say that the ♀ died of unnatural causes!

11 Dec Weird stuff up on the knoll. 0930, In the "favorite" VO perch tree near LA2, lots of action. At least 5 Black Oak birds (♂497, ♀741, ♂742, ♂743, ♂744) and some ♂ + ♀ NB hanging out. Some LA2 birds were in the picture for a while, too. Even saw ♀741 chase somebody else! What's going on? ♂742 also chased somebody.

1030, It looks like the BO birds ~~black~~ are gathering acorns from a tree in S. Ravine, and they seem to have taken over the knoll. Also, there are no acorns stored in the VO just below the

Melanerpes formicivorusBianca

(11 Dec) the knoll perch tree. Further down the ridge, and especially in the VO furthest down, there are a fair # of acorns, and I've not seen any of the BO birds down there. What's more, the BO birds are carrying the acorns they gather back to Black Oak. So I would guess that Bianca is still occupied by NB birds. I saw a ♂ + ♀ NB on the knoll chased by Black Oak birds, so those could have been the Bianca residents.

1115, yes, down in the core Bianca area I see a ♂ NB and a ♀ NB

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Melanerpes formicivorus

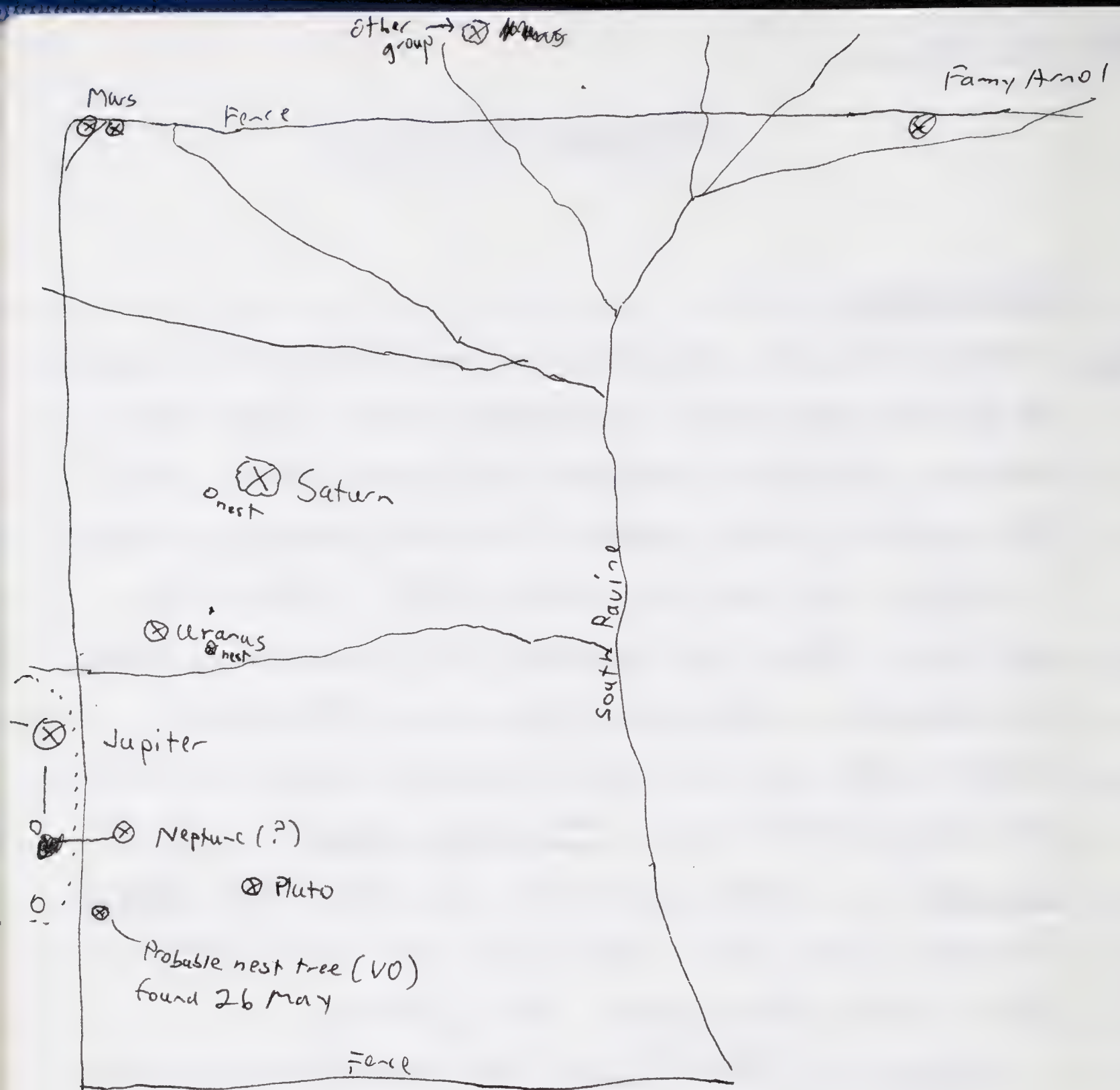
Outer Planets

14 May

Today I wander across to the far side of S Ravine to look for peripheral woodpecker nests. And these nests are about as peripheral as you can get. See the map on the back for details of where the groups are. Saturn -- without much effort at all, I find the nest here. It's in a ridiculous hole, in a dead, paper thin stub of a Valley Oak 20m S of the granary. I get it open and manage to patch it back together well enough, and found 4 healthy babies, 8-10 days old. I should band them no later than 26 May. The granary, here, is a very nice live + dead Valley Oak, with lots of acorns still present.

Uranus -- Didn't even know about this group until I got over here. A few acorns in a dead Bleached stub (very large, but short) and also some acorns in some dead limbs of a nearby live Valley Oak. Two birds flushed, but not any holes or nests found. Whoa, just as I'm leaving I flush a bird out of a nice hole in a Blue Oak. I climb up, open it, and find 3 eggs fairly fresh (~3 days). A pretty wimpy group here, but good nonetheless to get the nest.

Jupiter @ This granary is just off the reservation, which is unfortunate. It's truly one of the most impressive Valley Oak granaries I've ever seen. The nest is undoubtedly off too. Whoa, 1700 I see a terrific "pack" of 3! Serious mateguarding, so I guess they haven't nested yet. Jupiter seems to own a huge chunk of



Melanerpes formicivorusOuter Planets

(14 May) ~~all~~ real estate along the fence line, including several good Valley Oaks loaded with holes. I saw the "pack" fly all around the area, so I assume it is all one huge group.

Neptune ^(?) -- a dead stub Valley Oak granary being overgrown by a Madrone. Probably part of Jupiter, but I'm not positive. Acorns still present.

Pluto -- Nice group based around 3 Valley Oaks along a nice flat downhill (through a beautiful Black Oak woodland) from Neptune. Lots of acorns, + lots of nice looking holes, but no nest. I will try here again.

26 May Walk over here, 0930. First I visit Saturn + find 4 nice-looking babies. I band them, and they are now Juvs # ~~the~~ 732-735! Plenty of acorns here still.

I swing past Uranus, and flush a bird from the nest there, and I hear plenty of begging. The babies have indeed hatched. and they sound ~ 5 days old or so. ^{Acorns still present here, too.}

Then, down to Pluto at 1030, but I again strike out as far as finding a nest goes. Surely there must be one. Plenty of acorns + potential nest holes.

Whoa, just as I'm walking up, I find a large VO with a couple of holes up right next to the fence (see map back of page 1), and I think I hear ^{baby} woodpecker noises coming from

Melanerpes formicivorusOuter Planets

(26 May) one of them, though I wasn't convinced of this. The Lole, unfortunately, would be a real bitch to get to, and at this stage of the game I'll let it slide: maybe next year.

Then on the return trip, I finally see a good set of 2 granary trees right at the SW corner of the reservation. The fence forms a little triangle here, and there are two nice trees well stocked with acorns. Though one of the trees has some OK-looking roost holes, I suspect that the nest here would be off the reservation. Nonetheless, I shall dub this group Mars

12 June 1400 I walk over here (with Janet, Joanne, + Mary Peacock) and band two nestlings at Uranus, Now Juvs. 802 + 803 ~~where~~ The third egg in that nest did not hatch. Uranus is now absolutely OUT of acorns, so it is definitely not one of the stellar groups on the reservation.

Also walked by Saturn, where I flushed a few birds and found plenty of stored acorns, but no sign of a second nest

1982 R.C. Mumme

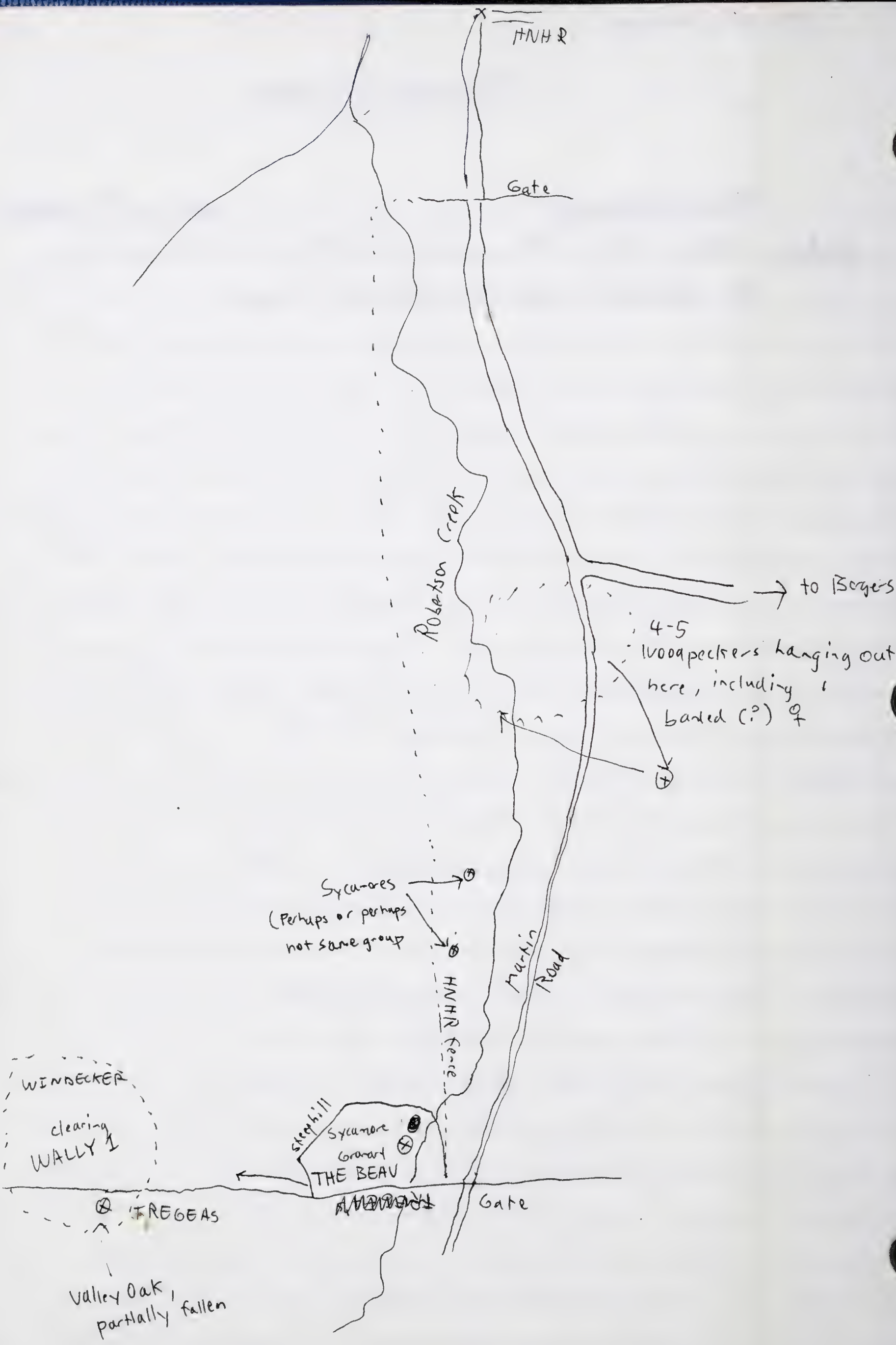
Melanerpes formicivorus

Robertson Canyon,

Hastings Reservation

27 Feb

1300 - 1500, Alan, Janet + I do a bit of exploring
for woodpecker groups up Robertson Canyon.

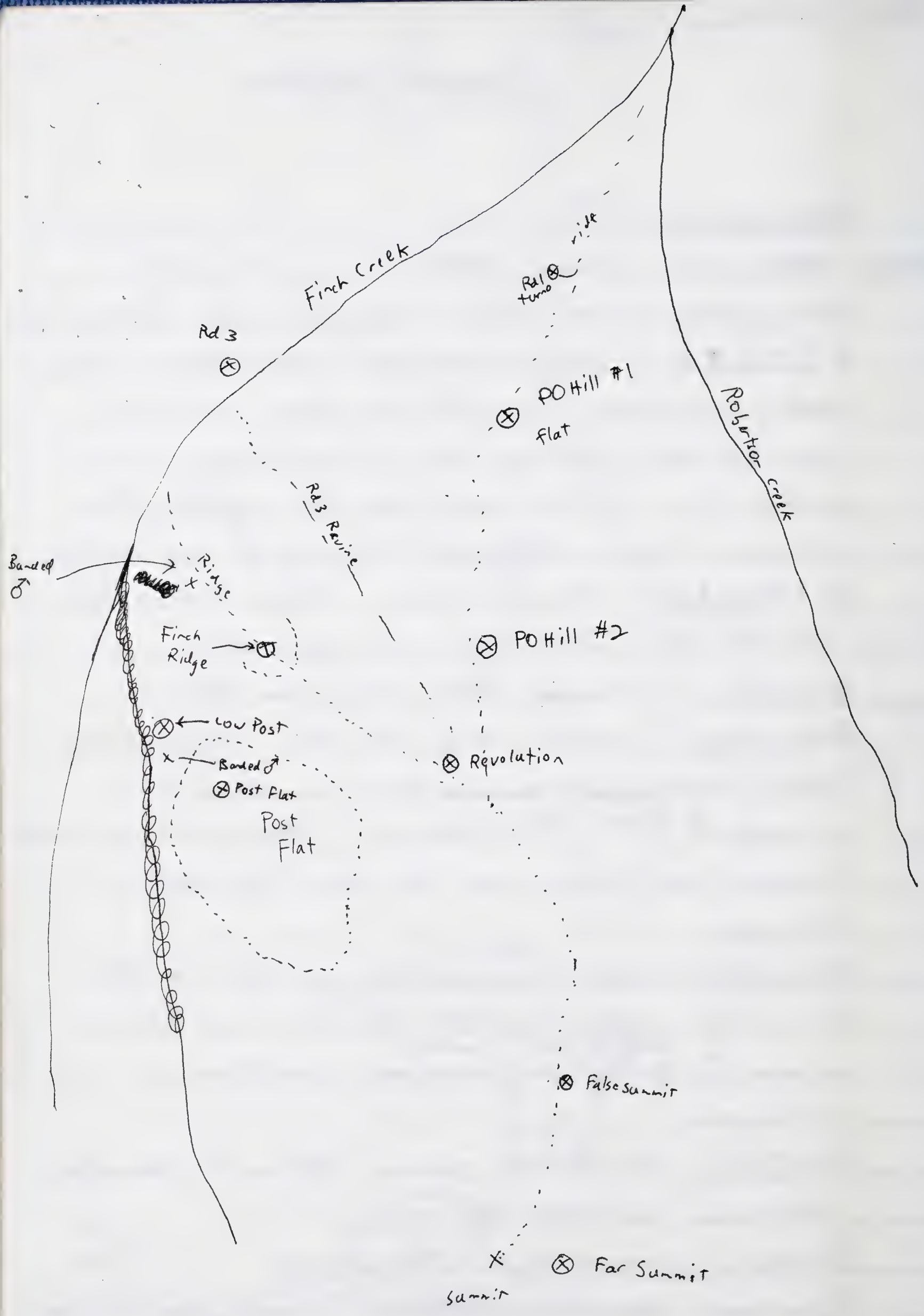


Melanerpes formicivorusPoison Oak Hill

23 Nov

Strolling around up here, 1230 - , I make the following notes on the status of the groups up here: (see map, reverse)

- ① PO Hill #1 -- Occupied & doing well: About 300 or so acorns stored in the various limbs: One small section of the main branch had fallen, with about 50 acorns, and I lodged it back up in the tree. All the stored acorns were agrifolia, (the only acorns I saw on the ground on the way up were agrifolia)
- ② PO Hill #2 -- Marginal, at best. Maybe 10 or 20 stored in the Valley Oak. Will have to check again, later.
- ③ Revolution -- Unoccupied: scant few storage holes after the fire.
- ④ Finch Ridge -- Occupied & doing pretty well. A Valley oak granary: Both lobata and agrifolia acorns in the storage limbs: a banded ♂ Metal/D Blue (pretty sure), D Blue-Wht/Mauve or L Blue (a guess) seen further down the ridge may belong to this group.
- ⑤ Low Post -- occupied, though not many acorns yet; Live Oaks nearby have a good crop. Valley Oak, bark-style granary: Metal/L Pink (probably) A banded ♂, Brn-Or/Red (a wild guess) almost certainly is in this group.
- ⑥ Post Flat -- One of the two "guardian" VO's near the lower edge is the granary. Well-stocked with acorns;
- ⑦ False summit -- unoccupied, apparently for some years
- ⑧ Far summit -- occupied, doing fairly well, acorn wise. Small VO granary, much poison oak around base



Melanerpes formicivorusPoison Oak Hill

12 May 0800, I finally make the long postponed trip up here to find nests. Right away I get lucky and flush a bird from a very low hole in a large Blue Oak at PO Hill #1. The tree was right along the ridge right in the center of the main granary area. I climb up open the hole (a bit uncomfortable) and find 3 babies (about 4 days old) and 2 unhatched eggs. The eggs differed greatly in size ① 23.5×19.4 and ② 25.2×18.1 ③ Also had a puncture wound, and all contents had been drained out. The other egg was undeveloped. Still Acorns at PO Hill #1, too.

PO Hill #2 -- Lots of acorns, surprisingly, in the big Valley Oak on the ridge 200 m above PO Hill #1. No nest found, but a Big Black Oak 30 m NE of the granary had several tasty-looking holes in it. I will check it again on the way back. No other holes seen on a rather cursory search.

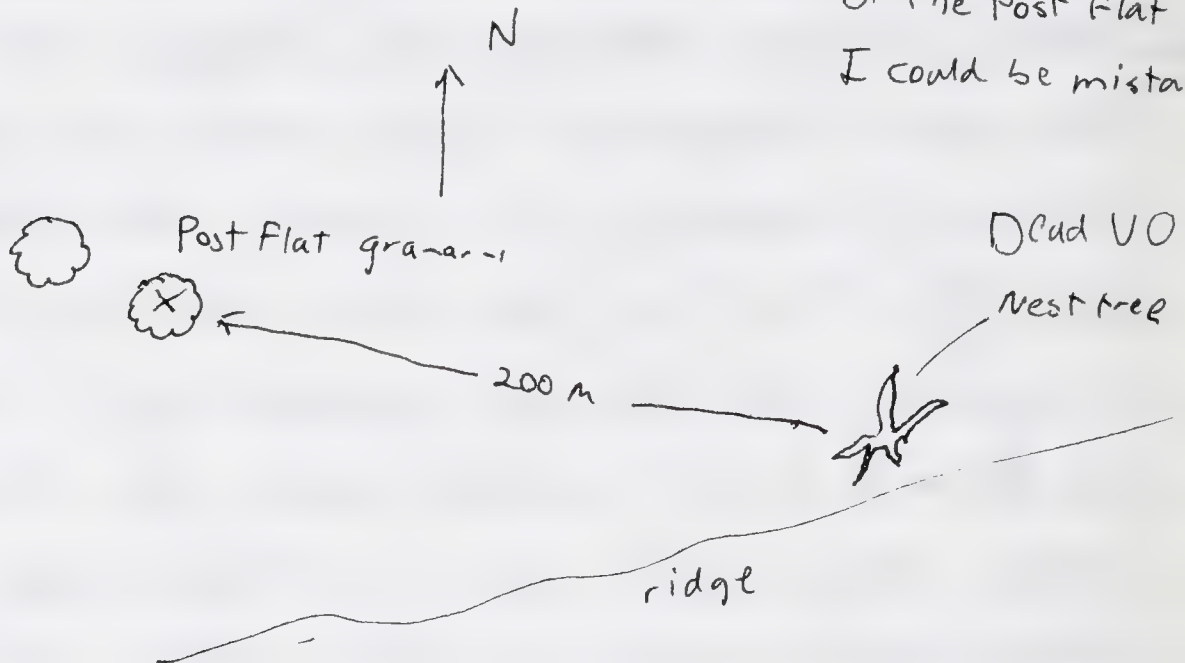
Revolution -- No stores, no birds, nothing going on in what remains of this territory.

Post Flat -- A truly impressive number of acorns here, (I think), plus, I find the nest that has long eluded Walter. A definite nest (adults feeding + brooding) in a large, totally fire-killed Valley Oak 200 m ESE of the granary, along the ridge that forms the S boundary of Post Flat. It seems a bit farther away from the granary than is usual, but I couldn't find any other granaries in the vicinity of the nest tree, and it seemed like the birds were shuttling back + forth.

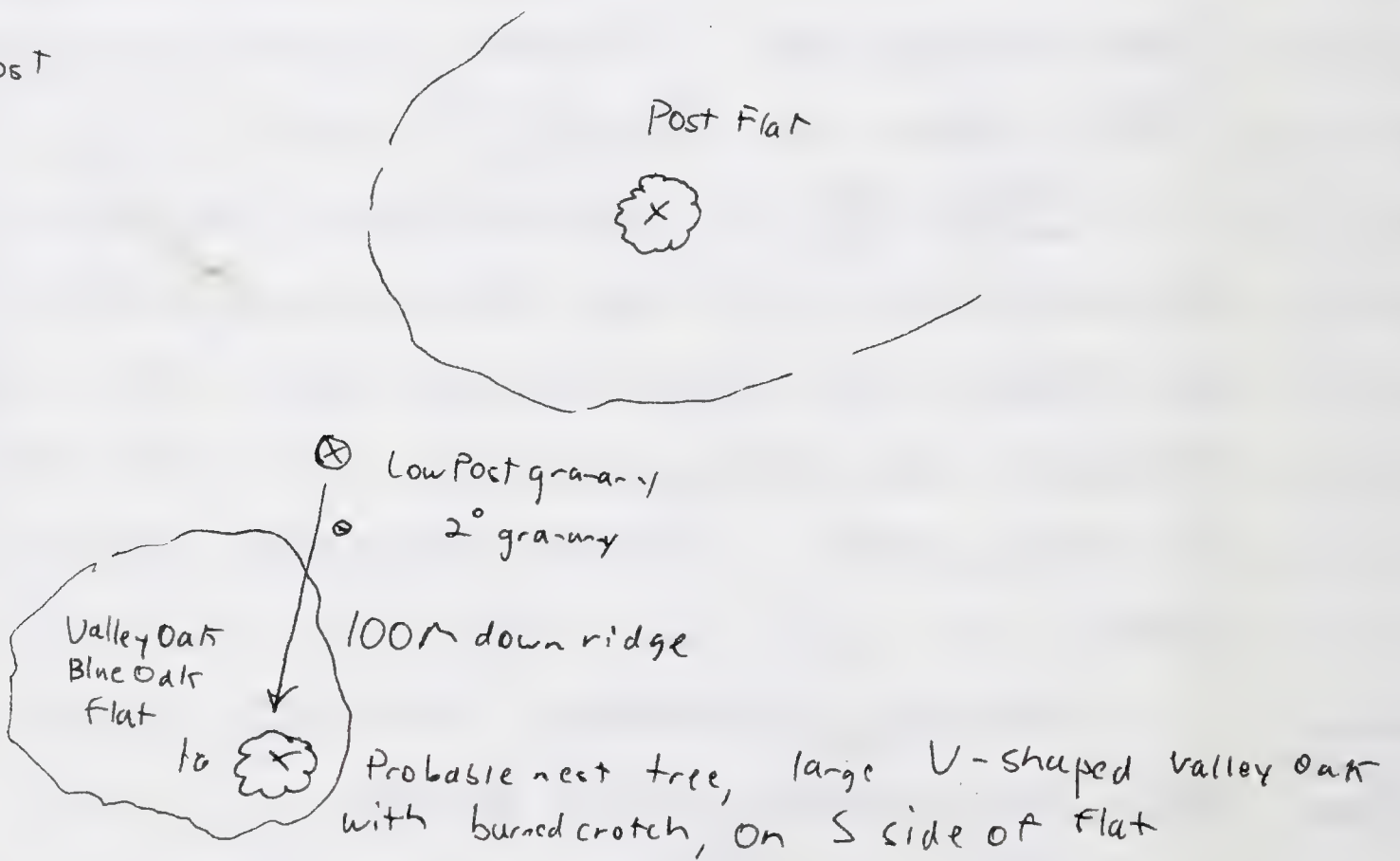
Mapo-back)

Post Flat

(I think this is the nest
of the Post Flat group, but
I could be mistaken)



Low Post



Melanerpes formicivorusPoison Oak Hill

(12 May) Unfortunately, I'm not sure I want to try getting up to it. It's about 50-60 feet up in a fire killed VO, and it would require at least the big rope ladder to get to. I'll have to think about it. The birds here, however, seem remarkably tame.

Low Post -- A good # of acorns still in the Valley Oak bark granary, which is only 30 m or so below Post Flat. Further down, I walk down + find a beautiful mixed VO-BO woodland on a fairly flat area, and a possible nest hole (see map back of page 1). I flushed a woodpecker out of a hole (I think) in a large V-shaped Valley Oak, with a burned crotch. I think the bird came out of the higher (of course) of the two holes. A rope ladder will definitely be needed. Probably in the egg stage. Also, some 2nd storage limbs (one substantial one in a Blue Oak) just below the main granary.

Finch Ridge -- (Poison Oak Hill #4 of Walter) I find the granary here absolutely out of acorns, ~~at~~ and nobody in any holes, including the hole in the VO granary that Walter opened in 1980.

27 May Walked up here ¹³³⁰ on another nest hunt. First I stop in at Poison Oak Hill #1, climb up to the nest, and band the three nestlings. They are now juvs. 745, 746 + 747.

On up to PO Hill #2, and I am extremely lucky! Just as I walk up, I see a bird fly from the granary to the Black Oak (mentioned on 12 May), go

Melanerpes formicivorusPoison Oak Hill

(27 May) to a hole, and feed babies. What could be easier! Anyway, a nice easy hole in the Black Oak 20 m down the ridge from the granary. I had brought a short length of rope ladder up with me so I used it. In a pinch, the hole is probably accessible via webbing. Anyway, I saw it open, and ~~am~~ ~~am~~ I am amazed to find 5 nestlings, perfect banding age (~20-21). I band them Juvs # 748-752. By this time, it is getting late, so I will have to postpone (maybe cancel) PO #4 [Finch Ridge] and Low Post for another time.

15 Dec 1345, Walter + I climb up here, he sits a while to watch PO Hill #1, I try PO Hill #2. 1415, nothing, I slip over to PO4 (FR) ♀ ^{M/Rod + Tan} ~~mauve/Red~~ ? , plus at least 3 other birds at Finch Ridge. More may be banded. 1500, In between FR and Low Post I see 2 banded ♂, 1 banded ♀, plus 1 ♀ NB. Obviously, it will take some work here. Finch Ridge has few acorns: Probably a result of the fire, as the area around FR was badly burned. PO #1 + #2 are doing pretty well, but I saw or heard no birds at #2.

